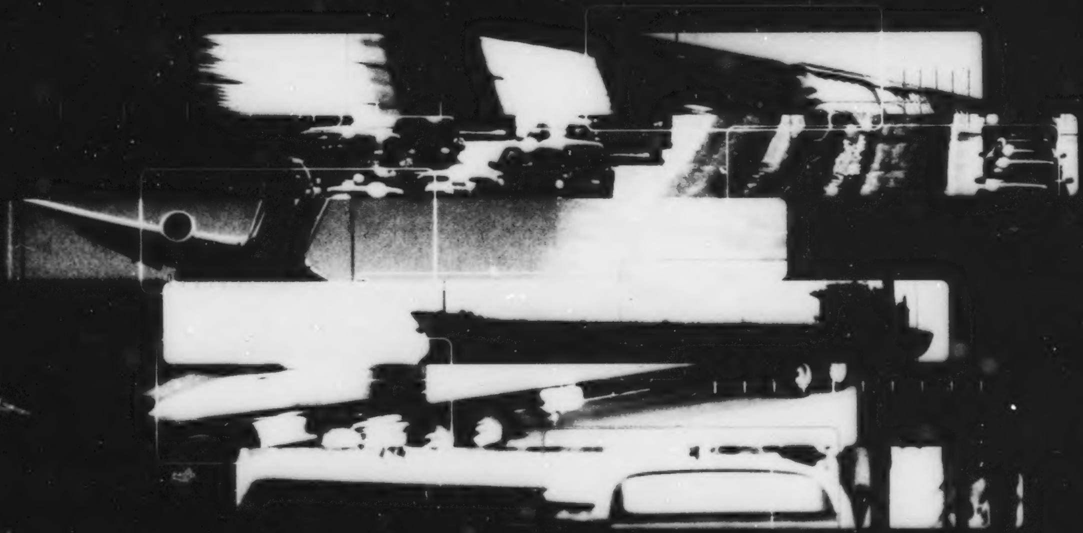

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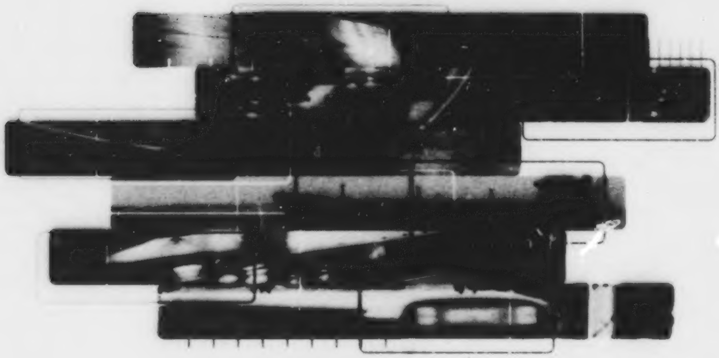

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Report of the *Canada Transportation Act* Review Panel

JUNE 2001

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Printed and bound in Canada
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ISBN 0-662-30668-6
Catalogue No. T22-107/2001E

Publié aussi en français sous le titre : *Vision fondée sur l'équilibre*

National Library of Canada cataloguing in publication data

Canada Transportation Act Review Panel

Vision and balance : Canada Transportation Act Review

Issued also in French under title : Vision fondée sur l'équilibre.
Includes bibliographical references.
Accompanied by a CD-ROM.
ISBN 0-662-30668-6
Cat. No. T22-107/2001E

1. Canada. Canada Transportation Act.
2. Transportation — Law and legislation — Canada.
I. Title.

KE209.C32 2001 343.7109'3 C2001-980196-3

This report is available on the *Canada Transportation Act* Review web site
www.reviewcta-examenltc.gc.ca

Printed on recycled paper

Canada
Transportation
Act Review

Canada

Examen
de la Loi sur les
transports au Canada

TO THE HONOURABLE
MINISTER OF TRANSPORT

Dear Minister:

We, the Members of the Panel, have the honour to submit to you, pursuant to Section 53 of the *Canada Transportation Act*, the report of the Canada Transportation Act Review Panel.

Respectfully submitted,

Brian Flemming

Brian Flemming, C.M., Q.C.
Chair

Jean Patenaude
Vice Chair

Glen M. Findlay
Member

Robert K. Rae, P.C., O.C.,Q.C.
Member

William G. Waters II
Member

June 2001

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Chapter 1
The Panel's Mandate and the Review Process

Good transportation is central to maintaining Canada's place among the world's most advanced economies. Canadians need to know that the transportation network — roadways of steel and asphalt, waterways and airborne highways — is just as critical to their economic well-being as the currently more fashionable information highway.

Canada was built on transportation. Our history is filled with examples of how transportation brought settlement, development and even political integration. But the role of transportation has shifted in recent years, from that of a public policy instrument to a vehicle that plays a narrower though still vital role as a key driver in the economy. Transportation is an 'enabler' of economic activity, both in the 'new' economy and in the 'old' one.

The title of this report reflects the two thematic threads running through the Panel's deliberations. One of the most common threads in submissions to the Panel was the perceived need for a vision to guide national transportation policy and the mechanisms to realize it. But in a world of rapid technological, economic and global change, it is difficult for government and industry alike to know where change will lead. What is needed is a transportation system that is efficient and responsive to changing demands from users, one that can stimulate and take advantage of technological and operational innovation by transportation suppliers. In this respect the Panel believes that an underlying theme — or vision — has in fact guided national transportation policy for more than three decades.

That vision, and its implications for public policy, were first articulated by the MacPherson Royal Commission on Transportation (1959–1961) and made national policy in the *National Transportation Act* of 1967. The vision expected transportation to be guided by the preferences of shippers and travellers, rather than government directives, and the vision relied on competitive market choices to produce an efficient transportation system.

An efficient system was the principal goal guiding federal transportation legislation and policy in the latter part of the twentieth century. The Panel believes this is still the correct objective for the new century. Canadians' economic well-being is best served by an efficient, competitive transportation system.

The transportation network's economic performance is a central objective of a national transportation policy, but there is more to transportation than economics. 'Balance' is the second major theme that arose repeatedly in the Panel's consultations and research. A balance is required between maximizing economic performance and ensuring that desirable social outcomes are also achieved. Searching for the right balance between economic efficiency and other goals is a central challenge for public policy generally and for this Panel in particular. We take up this challenge in the coming chapters.

The mandate of the Canada Transportation Act Review Panel stems from the *Canada Transportation Act* of 1996. The Act requires a comprehensive review, commencing no later than July 1, 2000, of the operation of the Act and certain other acts pertaining to the economic regulation of transportation. On June 30, 2000, the Minister of Transport, the Honourable David Collenette, appointed the Panel, with a one-year mandate to

- assess whether these acts provide Canadians with an efficient, effective, flexible and affordable transportation system, and
- where necessary or desirable, to recommend amendments to the acts, including the national transportation policy set out in section 5 of the *Canada Transportation Act*.

In setting the terms of reference, the Minister also took the opportunity to ask the Panel to suggest a resolution to the thorny and long-standing issue of competitive rail access. The Panel's interim report, submitted to the Minister in December 2000 and released publicly in January 2001, discussed the issues surrounding competitive rail access.

Finally, the Minister asked the Panel to consider several additional issues, in particular whether the current framework of transportation legislation and policy is effective in:

- sustaining expenditures to enhance productivity and promote innovation across the transportation sector,
- supporting the efforts of Canadian transportation players to adapt to the e-business environment and the demands of global logistics,

- dealing with public policy issues arising from newly emerging industry structures, and
- giving the government the necessary powers to support sustainable development objectives.

The Minister also asked the Panel to advise him on whether specific steps should be taken to preserve urban rail corridors for future mass transit use.

The full text of the Panel's terms of reference is presented in Appendix 1.

Carrying Out the Mandate

The Panel's mandate was thus extremely broad, encompassing all modes of transportation essential to the national economy. Coupled with a tight one-year time frame, the Panel faced a daunting task: designing a work plan, coming to grips with the issues, consulting broadly, developing principles and criteria as a basis for formulating and testing recommendations, and drafting a report to reflect this process and the conclusions emerging from it.

To complete the work in the time allotted, the Panel adopted an ambitious plan, launching activities on several fronts concurrently:

- Over a period of nine months, the Panel held consultations and conducted public meetings in 16 cities, from Vancouver to St. John's, Whitehorse to Iqaluit, travelling thousands of kilometres by plane, train, automobile and bus. Panel members made it their goal to visit every province and territory, to speak directly with interested parties, and to learn how the transportation system deals with Canada's vast distances, variable climate, and diverse urban, rural and remote transportation needs.
- After issuing a call for submissions and, part-way through its mandate, a paper entitled *Issues under Consideration*, the Panel received more than 200 formal papers from industry groups, producer co-operatives, labour organizations, transport companies, provincial, territorial, and municipal governments, federal departments and agencies, and individuals. Submissions were available for review on the Panel's web site (unless the authors requested confidentiality).
- The Panel launched a research program, commissioning or conducting some 50 studies. These run the gamut of transportation issues and, together with the submissions and consultations, make up the knowledge base the Panel used to draw conclusions and formulate recommendations.

Key Milestones	
July 2000	The Panel begins its work.
August 2000	Initial notice about the Panel process published. Web site up and running.
September 2000	The Panel issues a call for submissions, and publishes notices in daily newspapers and trade publications. Consultations begin.
December 29, 2000	The Panel submits its interim report on competitive rail access to the Minister of Transport. The Minister releases the report on January 10, 2001.
January 18, 2001	The Panel publishes *Issues under Consideration*, detailing other issues under review.
February 26–27, 2001	The Panel's Winnipeg symposium on rail issues brings together more than 150 participants.
March–April 2001	The Panel holds workshops on airline competition, infrastructure and road financing, urban transit and urban rail corridors.
June 2001	The Panel submits its report to the Minister of Transport.

Public Input

The goal was to receive input from the broadest possible spectrum of interested parties. The process was designed to be transparent and open about the Panel's approach to the work, the issues under consideration, and the opportunities to contribute.

Consultations took a variety of formats and attracted a broad range of participants who presented and often debated views before the Panel in public meetings and workshops, in formal and less formal settings, in open sessions and at by-invitation meetings.

Panel members met with each provincial and territorial government at the ministerial or officials level, and all governments submitted written briefs. This process helped raise the profile of the Panel's work, as provinces' and territories' meetings with the Panel often triggered further consultation processes as each prepared to meet the Panel or draft a submission. Provincial consultations in preparation for these meetings took these interests into account, giving Panel members the benefit of a broad range of views.

The Panel also consulted groups of industry participants through a series of issue-specific round tables, organized and facilitated by WESTAC (the

Western Transportation Advisory Council) and the Van Horne Institute — regional organizations based in Vancouver and Calgary respectively — and by the Institute for Research on Public Policy, an independent research body based in Montreal.

The academic community also played an essential role in advising the Panel. Academics from a broad range of post-secondary institutions across Canada shared their research and expertise at round tables with the Panel focusing on specific areas of the mandate.

Another information source was the Panel's survey of shippers using transportation services. The purpose of the survey, conducted during January and February 2001, was to review the operation of the *Canada Transportation Act* from the perspective of shippers and their experience with the availability, use, cost and quality of transport services.

The perspective offered by this survey was important for several reasons. Transport Canada's annual report looks at the state of transportation from the perspective of its contribution to regional and national economies, government spending on transportation, the state of infrastructure, industry productivity, energy use and environmental issues. Surveying shippers added an important dimension to this overview. Shippers' responses are discussed where relevant throughout this report; the complete survey results are available on the CD-ROM accompanying the report.

Finally, two documents prepared during the Panel's mandate — the *Interim Report on Competitive Rail Access* and *Issues under Consideration* — served as catalysts for further discussion among industry participants and observers. The interim report received considerable attention at the Panel's February symposium on rail issues in Winnipeg, while *Issues under Consideration* helped refocus the Panel's deliberations on the other issues in its mandate.

Consultation Results

On reflection, several of the Panel's decisions about how to conduct consultations proved advantageous. The decision to travel to every province and territory, for instance, gave the Panel first-hand experience with the daily challenges of keeping the transportation system moving despite weather, congestion and distance.

Hearing from interested parties in all parts of the country also exposed Panel members to the regional and local flavour of many transportation issues, highlighting once again the diversity of Canadian communities and the issues facing them.

Launching a web site proved highly beneficial. The Panel had anticipated the benefits in terms of facilitating logistics and promoting transparency and openness in the Panel's process. An added — and perhaps unanticipated — benefit was that the web site promoted interaction *among* industry participants in a way that has seldom been possible in the past but will now be a benchmark for future consultation processes. Even before groups met with the Panel, they could read and reflect on others' submissions posted on the web site. They could review research findings, as well as opinions and positions advanced by other interveners, and have an opportunity to weigh them in articulating their own concerns. Although it was designed to solicit and generate feedback on the Panel's mandate, the web site also became a means for communities of interest to exchange information and participate in the Panel's process to an extent not possible in the past.

Before turning to the substantive issues, a brief review of the backdrop to the Panel's work is in order. The next chapter traces the development of Canadian transportation policy and legislation, the jurisdictional landscape, and the trends influencing the current state and future development of the transportation industry.

Chapter 2
Context for the Panel's Review

Transportation plays a key role in the Canadian economy. With a small population, spread over a vast geographic expanse, and a trade-oriented economy, Canada is especially dependent on a well developed and efficient transportation system. This is the reality today, much as it was a century ago. Views about how government can contribute to achieving an efficient transportation system have changed dramatically over the years, especially in the last two decades.

Fundamental changes in the federal government's role regarding transportation provide part of the context for the Panel's review. The review also took place against a backdrop of change in the Canadian and global economies. These shifts present new opportunities and challenges for suppliers and users of transportation services. At the same time, they raise new questions about the policy framework that has been created to promote the development of an efficient transportation system.

Policy Context

In 1961, the MacPherson commission produced a seminal report that continues to have a major influence on transportation policy. In line with the commission's recommendations, the principle of competition between modes became a cornerstone of the *National Transportation Act* of 1967. The act also adopted the commission's principle of user pay (although implementation was limited).

In the next major revision of transportation legislation, the *National Transportation Act, 1987* extended the principle of competition to require competition within as well as between modes; competition was now to serve as the principal mediating force across the entire system. The 1987 legislation also brought further deregulation of air and trucking, legislated pro-competitive rail measures, and introduced provisions for adjudicating disputes.

Five years after it became law, the *National Transportation Act, 1987* was subject to statutory review by the National Transportation Act Review Commission. That review, which took place at the end of the most severe recession since the Second World War, focused particularly on legislative restrictions that were limiting carriers' ability to rationalize operations. Its recommendations led to the *Canada Transportation Act* of 1996.

The Canada Transportation Act

The *Canada Transportation Act*, which came into force on July 1, 1996, was the culmination of efforts to update and modernize the *National Transportation Act, 1987* (NTA 1987) and the *Railway Act*, a venerable fixture of the railway regulatory environment since before the turn of the last century. The *Canada Transportation Act* (the Act) continued the trend of deregulation and commercialization:

- A substantial commercial harm test was introduced, requiring that before the Canadian Transportation Agency granted a remedy, it be satisfied that the shipper would face substantial commercial harm without the remedy.
- On airline regulation, new consumer protections were instituted and the more rigorous licensing requirements of NTA 1987 for operation in the far North were eliminated.
- For the rail sector, the Act introduced sale and discontinuance provisions allowing railway companies to rationalize their networks more easily. It also lowered barriers to market entry. Its final offer arbitration provisions were modified and made applicable to northern marine re-supply and grain rates; availability of the recourse was also extended to commuter and passenger rail operators.

Other significant changes resulted from passage of the Act (see Appendix 2 for more detail on the Act and these changes). For the Agency, the Act brought new restrictions and powers, including the expanded authority to hear complaints from persons with disabilities in all transportation undertakings under federal jurisdiction.

The Act was amended further in 2000. A first set of amendments focused on the air industry and was introduced to respond to concerns arising from Air Canada's acquisition of Canadian Airlines. A second set addressed concerns in western Canada based on reports by the Honourable Willard Estey and Mr. Arthur Kroeger on the grain handling and transportation system.

Commercialization and Decentralization

Along with reduced regulation, the last two decades of the twentieth century saw substantial cutbacks in government subsidies and a major contraction of the federal government's direct role in providing transportation services. Under the twin themes of commercialization and decentralization, dramatic changes occurred. The government completed privatization of Air Canada in 1989 and of Canadian National Railway in 1995. Some east coast ferries were also privatized, while others were turned over to provincial governments or replaced by other means of transportation, such as the bridge to Prince Edward Island. The major components of air and marine infrastructure are now managed by independent not-for-profit organizations — airport authorities, port authorities, NAV Canada, and the St. Lawrence Seaway Management Corporation.

The shift toward a more commercial approach also resulted in the reduction or elimination of federal subsidies and a greater emphasis on user pay. The February 1995 budget announced the end of subsidy programs under the *Atlantic Region Freight Assistance Act* and the *Maritime Freight Rates Act* and repeal of the *Western Grain Transportation Act*. VIA Rail reduced its dependency on subsidies, increasing the percentage of its operating budget funded by users. Similarly, for Marine Atlantic and other private ferry operators receiving subsidies, the percentage relationship between revenue generated by users and operating/overhead costs improved.

Pressures and Challenges

The policy framework developed to foster efficient transportation is now being severely tested. At the root of many of the challenges to the framework are some broad economic and social trends.

Globalization and North American Economic Integration

International trade and the internationalization of business have been increasing for decades, but the pace of change accelerated in the past 20 years. Canada has long been an open economy but has become significantly more outward-oriented in the last decade. Since the signing of the Canada-U.S. Free Trade Agreement and NAFTA, Canada's economic ties with the United States in particular have become much stronger. An efficient transportation system is needed to ensure that Canadian firms can compete effectively in more integrated North American and global markets. At the same time, transportation carriers have come under pressure to improve their capacity to compete for North American traffic. In transportation, as in other sectors, one result has been a trend toward fewer, larger companies. Firms have merged to achieve economies, to expand the scope (including the geographic range) of their services, and to increase their market power.

These trends are expected to continue. Moreover, producers may not always be able to rely on a weak Canadian dollar to make their exports competitive. Substantial depreciation of the dollar has helped improve the international competitiveness of Canadian products over the past decade, but this crutch may not be available in the future. In coming years, pressures on transportation firms to compete effectively and support the efforts of other Canadian companies to meet the tests of international competition may well intensify.

Weak Commodity Prices

Resource industries did not share in the extraordinary economic boom of the second half of the 1990s. Prices have been low for coal, grain, lumber and most forest products and fisheries. Some of this might be transitory — the result of restructuring in eastern Europe and the financial crisis in eastern Asia — but over the longer term, real commodity prices (with the exception of the energy sector) have been drifting downward. Because transportation is a major component of the delivered price of resource products, producers are under pressure to reduce transportation costs. It is not surprising, therefore, that Canadian commodity producers have been among the most vocal critics of Canadian transportation policy.

Tighter Controls on Public Spending

During the slowdown of the early 1990s, governments came under pressure to reduce deficits and bring debt under control. This was an important factor underlying the devolution of air and marine infrastructure facilities, and other initiatives to reduce government involvement in and support to transportation. Spending cutbacks, combined with the strong economy of the second half of the '90s, brought most deficits under control, but governments continue to be resistant to major new spending commitments. This stance is based partly on the lessons of the past and recognition that strong economic growth cannot be sustained indefinitely. In addition, governments face demands in health and other core areas of public spending, along with pressure to make tax rates more competitive with U.S. rates. In future, then, public policy will have to be more inventive, forging partnerships and joint ventures and using public funds strategically to leverage other investment.

The Internet and E-Business

Information and communication technologies are transforming the way firms organize their activities. The consequences for transportation are twofold. First, information technology is greatly improving co-ordination and efficiency in transportation operations. Second, transportation requirements are changing as firms adapt their practices to pursue full supply chain management and the opportunities created by new technologies. Efficient, reliable and fast transportation is the underpinning of the tighter production and distribution systems that now characterize modern business operations. For transport policy, the challenge is to ensure that legislation supports the adoption of technologies with the capacity to improve industry productivity significantly.

Environmental Concerns

As a major petroleum user, the transportation sector is necessarily part of the focus of increasing environmental concerns. Local air pollution problems have received significant attention from policy makers over the years. Now there is intense debate about the possible broader consequences — global warming and climate change — of collective reliance on carbon-based energy.

Although Canada has emission standards and related pollution control measures, environmental concerns and sustainable development objectives do not feature significantly in the current policy framework governing transportation. Environmental considerations are a notable omission from the policy statement in section 5 of the *Canada Transportation Act*. Mechanisms are needed to address sustainable development concerns and to ensure co-ordination of relevant environmental and transport policies.

Urbanization

Canada is highly urbanized, with densely clustered settlement around a number of urban centres. In recent decades the proportion of the population living in large metropolitan areas has increased significantly. More than a fifth of the country's inhabitants are concentrated in the largest metropolitan region, the Golden Horseshoe of southern Ontario. Supplying and managing transportation, both passenger and freight, in increasingly congested cities has become a major challenge.

Urban transportation problems are complicated by an imperfect arrangement of jurisdiction and powers. Urban areas are arguably the location of the most significant transportation problems facing Canadians: congestion, accidents, air pollution, and so on. Yet city governance is fragmented, with municipalities pursuing their own objectives, often in conflict with neighbouring communities, and with very limited taxation powers. Although the federal government's constitutional responsibility is limited, it has a legitimate role, because urban transportation issues loom large among the challenges of developing a sound regime for transportation.

Factors Influencing Transportation Decision Making

Economic and social forces are creating the demand for a more efficient, more environmentally sensitive transportation system that can satisfy new logistical requirements arising from adoption of information technologies. At the same time, these forces raise new questions about the existing policy framework and its ability to foster the type of transportation system that serves the needs of Canadians.

In evaluating the current system, of central importance is the nature of the incentives governing the actions of users and providers of transportation services: passengers, shippers, carriers, governments and not-for-profit infrastructure organizations. These incentives determine whether appropriate resources are devoted to transportation, whether these resources are allocated correctly within the sector, and whether they are used efficiently to produce services that satisfy the needs of shippers and passengers. The economic and social forces just discussed focus attention on several potentially significant weaknesses in the incentives now in place.

- First, they draw attention to incentive problems created by the failure to give transport users correct price signals.

In an efficient transportation system, all costs are reflected in the prices charged for services. This includes the costs incurred by firms transporting goods and passengers and the costs borne by governments or others in operating and maintaining the fixed facilities on which transportation operations take place. It also includes the costs transportation activities impose on society, such as congestion and pollution.

The *Canada Transportation Act* recognizes the principle of establishing correct prices that ensure "the best use of all available modes of transportation at the lowest total cost." However, many of the charges for government-provided transportation services and infrastructure do not reflect the cost of meeting various users' requirements.

Moreover, little progress has been made in introducing fees and charges that would ensure transportation users recognize the costs their activities impose on society. This has more serious implications at a time of heightened concern about environmental effects and about the delay and inconvenience users impose on each other when they use congested urban roads. The development of policies to sensitize transportation users to the costs associated with their choices raises complex issues — issues that touch on the responsibilities and concerns of all three levels of government.

- Second, they raise issues about the incentives that influence the activities of public and not-for-profit providers of transportation infrastructure.

In a climate of spending restraint, it is especially important to allocate the limited resources available for transportation infrastructure carefully. This implies a greater role for institutional arrangements and reporting systems to guide policy makers and help discipline public spending on transportation infrastructure.

The not-for-profit organizations established to manage airports, ports, the air navigation system and the St. Lawrence Seaway represent one attempt to inject greater commercial discipline into infrastructure operations. It is still early in the life of the air and marine infrastructure corporations, but the government's general approach to commercializing air and marine infrastructure may be a useful model that can be extended.

- Third, they are causing some shippers and travellers to question the current reliance on markets and market incentives to achieve transportation objectives.

Of the three concerns about transport incentives, this poses the most serious challenge. Reliance on market forces as the principal mechanism for organizing transportation is a major element of current policy. Market forces have appeal because they are an impartial mechanism that is generally effective in promoting efficiency. But if, as a result of industry consolidation, markets are not competitive and cannot be relied on to achieve efficiency, policy intervention may be necessary — either to find ways to increase competition or to devise regulatory substitutes for it.

Both the United States and Canada have witnessed consolidation in the transportation sector, but concerns about the high degree of concentration in transportation markets are much greater in Canada. Canada has long been limited to two Class I freight railways, compared to half a dozen in the U.S., even after recent consolidations. Canada's domestic air market now has one dominant carrier. A single firm dominates intercity bus transportation. The intercity courier industry is highly concentrated in both countries. One of the major tasks facing the Panel was to determine whether and to what extent changes in market structure call into question the principle — accepted since the *National Transportation Act, 1987* — that market pressures should be the primary force shaping developments in transportation.

A Modal Perspective

In developing a policy approach, the Panel recognized that concerns about incentives apply differently to the various modes. Issues differ in sectors where infrastructure is provided by industry, government, or not-for profit organizations. Concerns about social costs are greater in some sectors than others. Market concentration is an issue in some modes but not in modes where it is relatively easy for new carriers to enter the market. Modal distinctions are also important because the major participants in some modes fall under federal jurisdiction, while other modes are the responsibility of provinces and municipalities.

Rail

Railways were mainly under federal jurisdiction in the past, but with the growth of the short line industry, there are now several railways under provincial jurisdiction. All share the characteristic of vertical integration of infrastructure and operations. Further, they operate on commercial principles, so that if portions of infrastructure and operations are not commercially viable, companies have been allowed to divest themselves of infrastructure and terminate operations on it. Policy must take account of the need for incentives that promote both efficient carriage and efficient infrastructure provision by commercial railways.

Road

Roads are provided mainly by provincial governments, supplemented by municipalities. Federal involvement is limited. Both federal and provincial governments levy taxes on fuels used by road vehicles, but these are not user charges and do not reflect the different costs various types of users impose on the road network. Moreover, provision of road infrastructure is not guided by commercial principles — although there is some correlation of road investments with traffic volumes.

In part because road users — unlike railways — do not bear the financial risk of making major investments in infrastructure, the trucking industry is a relatively easy one to enter. In trucking, therefore, competition should logically promote efficient market outcomes, subject to correct charging for road use.

Air

Airlines are a federal responsibility. With much of Canada's air infrastructure now being supplied by not-for-profit organizations, however, a main focus is the incentives governing the decisions of these independent operators of airports and the air navigation system. There is a need to examine whether these organizations are being encouraged to make decisions that support the development of an efficient air sector.

In the case of air carriers, the degree of concentration in the domestic industry is of concern. Options for strengthening competition — so that market incentives are more likely to lead to results consistent with the public interest — must be examined.

Water

Water transportation makes use of 'natural' infrastructure — oceans, lakes, rivers and harbours — but some infrastructure investments are still required, including dredging, navigational aids and ice-breaking. Providing marine infrastructure has traditionally been a federal responsibility, but major ports and the Canadian portion of the St. Lawrence Seaway are now operated by not-for-profit organizations. As with air infrastructure, the question is whether private operators are subject to governance arrangements that promote efficient management.

Marine freight transportation is provided by commercial carriers that operate in a largely competitive environment. Passenger transport has not been guided to the same degree by commercial principles; federal subsidies for ferry operations have declined in recent years, however, and several east coast services have been privatized or eliminated. Some subsidized services remain on both coasts, fulfilling constitutional obligations or maintaining long-standing services to remote communities.

Urban Transportation

Urban transportation is a provincial and municipal responsibility. Federal involvement has been minimal — restricted to vehicle safety and emissions regulations and ad hoc expenditures. Local road infrastructure is supplied from general government revenues, mainly by municipalities, although provincial grants and road building projects can also play a role.

Urban transit, including buses and rail transit, is still supplied mainly by government rather than the private sector. Rail transit is generally government-owned and heavily subsidized. The latter reflects both a social policy of providing transportation for those not able to drive and recognition that reducing traffic congestion benefits motorists and reduces the need for new road investment.

Commercial motivation has almost no role in the provision of urban transportation. There is a wide gap between the cost of providing urban transportation — whether by car or by transit — and the price paid by users. In addition, the signals conveyed to road users are distorted because of their failure to convey the high social costs of increasing automobile use in urban regions.

With this backdrop as the context for the Panel's review, the next chapter looks at the principles and themes that provided both the starting point and a compass to orient the Panel's work.

Chapter 3
Guiding Principles and Themes for a Review of Transportation Issues and Policies

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This chapter offers an overview of the Panel's approach to the issues, along with some of the common themes that arose in the course of the review. Subsequent chapters focus on specifics, often in relation to one mode. But the Panel tried to apply a consistent approach in reviewing issues and recommending action for all modes, guided by the principles described here.

Principles and Themes: Finding the Starting Point

Panel members brought to the process a range of experiences and perspectives. Over a period of months, however, consensus on several fundamental elements developed as a result of the consultations, submissions, discussions and debate. The main goal guiding the Panel was an efficient and effective transportation system, but other principles and themes emerged to complement and further this goal. What follows is a synopsis of these guiding principles and themes. The ideas are elaborated in the next section in relation to transportation issues and policies generally. Readers will also find the principles and themes permeating the discussion of specific modes and issues in the remainder of the report.

Competition: The best means to an efficient and effective system is to rely on market forces. Ideally, competition is fostered through commercial means. There may be some situations, such as low-density or captive markets, that warrant targeted forms of regulatory intervention, but regulation should be used only to solve instances of market failure.

Pricing: Sending the right pricing signals to transport users will lead to the right amount of use and the right distribution among modes. Pricing may not be everything in making the system function well, but it is a key element. Public policy experience around the world demonstrates that the wrong pricing signals send objectives off track. Sending incorrect signals leads to inefficient infrastructure investment, industry production and location decisions, compounding inefficiencies over time.

Harmonization: Creating a 'seamless' transportation system faces many complications and barriers, including diversity in modal technologies, organization and provision of infrastructure, regulations, and levels of government oversight. Wherever possible, potential technical or institutional conflicts should be minimized or eliminated, especially given the strong link between trade and transportation. The Panel believes that harmonization or compatibility in all facets of transportation among countries (and within countries) is a policy imperative that should be supported and facilitated by legislative mechanisms.

Transparency: Information is essential for both government accountability and competitive markets. Citizens are both taxpayers and consumers, and the more they know the better. The Panel was struck by the limited amount of public data on transportation system functioning and performance. The result of greater access to information will be a transportation system that functions more efficiently and is more responsive to the needs of users and service providers.

Flexibility and Adaptability: The life cycle of legislation and regulation is often measured in years and decades, while markets, technologies and people change much more rapidly. The regulatory environment for transportation must be responsive to this ever changing world, and efforts must be made to adapt solutions rather than trying to create one-size-fits-all solutions.

Self-Executing Policies and Regulations: In developing public policy to facilitate a more efficient transportation system, government should design legislation in such a way as to encourage parties, to the extent possible, to mediate their own disputes, police their own problems, and measure and report on their performance. The requirement for detailed and expensive regulatory oversight should be avoided as far as possible.

Simplicity and Practicality: Throughout the Panel's review, the optimal approach was to choose options that were simple in concept and practical in application. In most cases this meant opting for the least interventionist solution and relying on market forces to deliver public policy goals. At the same time, the Panel was wary of proposals that were too simplistic relative to the complexity of a given problem or circumstance.

Applying these principles is often a question of balance — principles may overlap or conflict in different situations. The Panel sees the role of public policy and legislation as not necessarily to decide on the balance that should prevail in any particular situation. Rather it should be to create a commercial, civil, legal, and regulatory environment where such balances can be promoted according to the circumstances of those most directly concerned. The next section sets these sometimes abstract principles in the context of the Panel's work and national transportation policy generally.

The Objectives of National Transportation Policy

The seminal role of the MacPherson commission was described in Chapter 2. The commission drew a distinction between national policy and national transportation policy. National policy refers to the broadest goals: achieving a national identity and unity, economic development but accompanied by concepts of equity and justice, social welfare, and so on. Transportation may play a role in reaching these objectives, but the focus of national transportation policy is the health and performance of the national transportation system. The MacPherson commission recommended that

> the objective of a National Transportation Policy shall be to ensure that the movement of Canadian goods and people is effected in a manner which utilizes fewest economic and human resources. This is merely to say that, given the preferences of those people who wish to move themselves or their goods, the movement shall be accomplished as efficiently as possible.

This recommendation was adopted in the *National Transportation Act* of 1967:

> It is hereby declared that an economic, efficient and adequate transportation system making the best use of all available modes of transportation at the lowest total cost is essential to protect the interests of the users of transportation and to maintain the economic well-being and growth of Canada…

Subsequently, the *National Transportation Act, 1987* and the *Canada Transportation Act* of 1996 were explicit in stating that the way to achieve an efficient system was to rely on market competition as far as possible:

> competition and market forces are, whenever possible, the prime agents in providing viable and effective transportation services… (section 5 of both acts)

Regulation or other public action is called for where competitive forces are lacking.

By and large, these principles have guided transportation legislation and policy for more than three decades, although some principles have evolved very slowly for some modes. The Panel agrees: the central goal of national transportation policy is an economically efficient transportation system making the best use of all modes at lowest cost. As noted in Chapter 1, however, there is more to transportation than economics.

Legislative change in 1987 and 1996 brought several additional considerations into the statement of national transportation policy, including safety, accessibility to people with disabilities, and regional development. Additional objectives were suggested during the Panel's consultations: environmental goals and sustainable development, efficiency in energy use, co-ordination and integration of modes, and policies to sustain rural communities.

The Panel is acutely aware of the need to balance the fundamental goal of an economic and efficient transportation system with other benefits from the system through constraints or public obligations imposed on it. These issues arise at several points in this report.

Reviewing Transportation Issues and Policy: A Compass for the Journey

Subsequent chapters are structured by mode or questions from the Panel's terms of reference. This was a convenient way to address specific issues and make recommendations. Some themes are common to all modes and chapters, however. This section summarizes these themes, which together provide a compass indicating a consistent direction across modes for future legislation and policy.

Competition and Regulation

The Panel concurs with the current policy statement that the goals of transportation policy are best achieved by relying on market forces and competition as far as practicable. Competition takes various forms, including intramodal, intermodal, and market or geographic competition. But some competitive forces are stronger than others. Very limited or restricted competition is different from the market ideal.

Where market structure restricts or prevents competition, government and industry should look for ways to promote competition and/or introduce regulations that attempt to simulate efficient competitive market outcomes. Where regulations are required, these should be as simple and cost-effective as possible. Regulatory mechanisms should be available in appropriate circumstances, but there should be incentives for parties to settle disputes commercially rather than to appeal immediately for regulatory intervention. Where regulatory decisions are necessary, the Panel believes regulators should have broad guidance or criteria to help them in their deliberations.

A commercial system requires that firms earn sufficient revenues to cover all costs, including long-run capital costs and return on investment. But even competitive markets do not guarantee survival; this depends on a firm's efficiency and on larger market forces that influence overall price levels and survival prospects, even for efficient firms. Where regulation is involved in determining prices and service, the complex cost conditions that underlie network industries make regulation inherently difficult and contentious. There is a role for differential or value-of-service pricing in reaching financial viability, but the need for such pricing does not imply complete freedom for suppliers of transportation services. Regulation is warranted where competitive forces are weak or lacking. Governments must weigh the benefits of intervention for users against the financial needs of carriers. These issues are taken up at length in subsequent chapters. They arise mainly with rail transportation, but the principles apply to other modes as well.

Pro-Competitive Policies

Arguments for stimulating competition rather than relying on regulatory intervention — that is, searching for pro-competitive actions instead of regulatory measures — received considerable attention in submissions to the Panel. One of the issues assigned to the Panel was the concept of 'competitive access', specifically for rail track. This would require that firms that own strategic infrastructure accept access to those facilities by would-be competitors. It is a highly controversial concept, and for good reason. It is potentially a real pro-competitive device, but it also raises fundamental questions about justice (property rights), operational co-ordination (safety concerns), and practical economics — notably owners' incentives to continue to invest in and maintain shared facilities. The concept of competitive access is explored at length in Chapters 4 and 5, but two points should be noted here.

- First, competitive access is not only a rail concept; it could arise in other modes whenever there is a need or an opportunity for competitors to share facilities.

This is why airports and ports are supplied by public agencies, not by air carriers — to ensure they are available to multiple carriers. Other potential access issues in air transportation include concerns about access to airport slots and gates that are already occupied by a dominant carrier and access to the dominant carrier's feeder network.

Similarly, most ports are common-user facilities, in part to prevent dominant carriers from forestalling competition from smaller carriers. The Panel has tried to be consistent in how such policies might work in the rail industry as well as in other modes.

- The second general point about competitive access is that it is *not* a non-regulatory solution to a lack of competition.

If access is provided, extensive regulation is required to oversee conditions of access and the price, to monitor safety and operations, and to settle disputes. Whatever the shortcomings of regulation versus relying on markets, they will carry over to a competitive access regime. Hence, an exploration of competitive access regimes must pay close attention to the implications for the regulatory agency and to the feasibility and cost of administering competitive access policies, whatever the mode.

Public Infrastructure and an Efficient Transportation System

Transport Infrastructure Investments and Economic Growth

The importance of transport infrastructure investments for economic growth has long been recognized. There was a surge of interest in this subject during the 1990s, following studies that correlated the proportion of public spending on infrastructure with economic growth.[1] In this context, participants in the Panel's consultations often pointed to infrastructure spending in the United States under its *Intermodal Surface Transportation Efficiency Act* of 1991 and *Transportation Equity Act for the 21st Century* of 1998 (known as ISTEA and TEA-21).

The Panel heard calls for similar expansion of public infrastructure programs in Canada. Transport infrastructure investment will be important for the country and its regions. At the same time, these investments do not guarantee economic growth; they must be targeted to where the conditions are right, where complementary resources are present and market developments are taking place. Management and decision frameworks must be in place to foster investment where it will produce the greatest overall return. It is not the Panel's mandate to evaluate specific infrastructure projects, but rather to review economic prospects and institutional frameworks to see whether they will facilitate the level and type of investment needed to sustain, expand and advance the transportation system. This theme recurs in several chapters.

Objective Infrastructure Provision and Funding

Infrastructure provision also affects the competitive balance of transportation modes. As explained in Chapter 2, the modes differ in the extent to which governments fund infrastructure investments and those investments are recouped from user charges.

One interpretation of the dramatic shift in policy direction on infrastructure funding and user charges in the late twentieth century is that it was intended to enable more objective decisions, moving to regimes where infrastructure is paid for by users and investment in it is linked directly to user support. For railways, this was manifested in reduced regulation, elimination of subsidies, privatization of CN, and permitting rationalization of lines.

For air transportation, air navigation was devolved to a user-controlled 'quango' (quasi-autonomous non-governmental organization) to provide these facilities and pay for them. Large airports have been devolved to local authorities answerable to the community, and the airline industry has been largely deregulated (although issues of regulation have re-emerged in the airline sector; see Chapter 7).

For water transportation, although debate continues, the major ports are shifting to greater local control, the Seaway authority is now commercial, and — again the object of some controversy — navigation aids and facilities are subject increasingly to user charges.

The Panel concurs with these moves to link infrastructure investment and funding more closely, or even to permit direct control by users; indeed, we sought to refine and make these systems even more accountable to users. The Panel also believes this approach should be extended to roads and urban transportation. This direction is vital to improving the transportation system, and we see a role for federal leadership. Squabbles between federal and provincial governments over road funding and regulatory issues are well recognized by road users and are a regular source of complaint. Some parties believe strongly that taxes, fees, and other charges collected from transportation infrastructure users should be invested in maintaining and building that infrastructure. Users and provincial governments urged the Panel to help articulate a vision to overcome the current impasse. These issues are taken up at some length in several chapters.

The Panel believes that the transportation system will evolve most efficiently once more appropriate pricing signals are set and, under the direction of users and market incentives, applied to all modes. This report suggests ways of moving toward such a framework.

The Problem of Low-Density Markets

Some markets cannot support more than one transportation supplier. Examples include bus or air service to a small or even medium-sized community, or rail service on a branch line. The ideal is competition among suppliers, but a commercial firm has to generate sufficient revenues to sustain the provision of service. There are at least some economies of scale, so low-volume markets may not be able to support more than one carrier.

These markets are not necessarily hostage to the supplier; an established carrier could be displaced by a more efficient rival. This is the concept of 'contestable markets'. The threat of market entry may be sufficient to prevent a sole supplier from exploiting what appears at first glance as a monopoly position. Removing or minimizing barriers to entry can facilitate this form of competitive pressure. Competitive forces take time to work, however, just as regulatory intervention does. For low-density markets, there may be periods when prices rise and/or service deteriorates from a competitive level, and it takes time before corrective forces — the market or regulation — can intervene.

Where markets are 'thin' and/or competition is absent, governments try to substitute regulation. But like markets, regulation is imperfect. Regulation brings costs — administration, delay and potential new sources of inefficiencies. It is a matter of balance and judgement whether regulatory intervention can compensate for the lack of market competition. It may not be practical to bring regulatory relief in all circumstances, including where traffic volumes are small.

The inability of small markets to support much competition is even more of a problem when it comes to infrastructure. All infrastructure exhibits at least some economies of scale; sizeable initial investments are required, especially relative to potential traffic volumes. As a result, full cost recovery from local users might not be realistic. The economics of larger volumes make cost recovery a practical policy for larger markets, but not necessarily for small ones.

No one suggests limiting infrastructure to what can recover its full costs. Social and political considerations require providing access and other services to residents in remote and low-density regions. But trade-offs are inevitable. The same level of accessibility and services, for example, will not be available in low-density markets. This problem is particularly challenging for a country with vast territory and limited population. Until recently, subsidies to infrastructure in low-density regions have been considerable. But as we move toward commercializing infrastructure supply where feasible, the problem of providing and financing infrastructure where there is little scope for cost recovery and self-finance becomes more visible. There is no immediate answer to the question of what the minimum or desirable level of support for low-density regional infrastructure is or how it should be financed. These challenges have existed throughout Canada's history, and they exist at all levels: national, provincial/territorial and municipal. Optimal infrastructure investment and financing where it is not commercially viable should attract considerable examination and debate in the coming years.

New Influences on Transportation System Efficiency

While not entirely new, two recent developments warrant greater recognition in national transportation policy:

- the importance of incorporating environmental costs in identifying the most efficient transportation system, and
- the constraints on policy design that may arise because of the significance of international and, particularly, continental trade.

In principle, in an economically efficient transportation system, both users and suppliers recognize the true costs. Just as public provision of facilities without adequate charging distorts users' choice of modes, failing to recognize environmental costs results in a less efficient transportation system and lower standard of living. This is particularly true for urban transportation, where it is clear that automobile use, especially during peak periods, imposes costs beyond those recognized by users and where transit prices are deliberately subsidized, partly in an attempt to counter the distortion of under-priced urban car use.

Incorporating environmental charges is not easy; there are controversies in establishing dollar values for them and figuring out practical ways to implement them. But the Panel believes that steps in this direction are needed to improve the economic and social performance of the transportation system.

The second issue that has emerged recently is the significance of international trade. Canada has long been a trading nation, but recent decades have seen international trade, especially with the United States, become even more important. With more trade crossing borders, the performance of the transportation system affects how well Canadian industries can compete. Moreover, the transportation system itself often competes directly with that of other countries. The policy and regulatory regime must therefore neither favour nor hinder transportation relative to other industries.

The economy and national standard of living will best thrive if Canadians can work in industries and services where they have comparative advantage. If transportation is taxed more heavily than other domestic industries, this puts the transportation system at a competitive disadvantage. Similarly, given growing trade and integration with Canada's large neighbour to the south, greater mutual consistency of policies may be needed, even if they deviate from what would have been optimal in a perfectly competitive world. This is not a hard and fast rule, but it is a consideration of growing importance.

Accountability and Transparency

Whatever the policy, the Panel believes that the level of public debate and sometimes even corrective action would be facilitated by greater visibility of transactions. Greater availability of data would foster additional private and public policy analysis.

The Panel has attempted to suggest regulatory frameworks and infrastructure provision that would be more open to public scrutiny, along with the types of information that should be collected as a matter of course and made available for analysis.

Using Transportation to Achieve Non-Transportation Objectives

Transportation is a pervasive presence in the economy. It links industries and regions and trade. It is how goods and people move about in cities, cross the nation and travel abroad. Transportation is part of the economic base of regions. Because of its pervasiveness, transportation is sometimes seen as a means to achieve non-transportation goals, such as regional development, political integration, improving quality of life by enhancing mobility, and adding to interregional income transfers. Transportation investments or policies might play a useful role in some circumstances, but the Panel is generally skeptical about trying to use transportation to solve social or economic problems that go much deeper. The Panel concurs with the MacPherson commission's distinction between the broad goals of national policy and the more specific goals of national *transportation* policy. Like the MacPherson commission and subsequent inquiries, this review looked at transportation policy and its attendant legislation. Even if certain transportation policies can be used to achieve social goals, an efficient system is the appropriate foundation on which to base the pursuit of broader national policy goals through transportation.

Achieving Balance

Convenience dictated a modal approach to drafting the Panel's report, but as far as possible, consistent principles and approaches were applied across the modes. The goal is an economically efficient transportation *system*. This implies efficiency within modes and across them. For all modes, the Panel prefers to rely on competition and market or commercial mechanisms if possible. If regulation is required, we looked for regulation that was cost-effective, that aimed for efficiency and that did not distort the efficient balance between modes.

Achieving Balance

A selective list of challenges

Reliance on markets	Regulation
Efficiencies of large-scale firms	Possible market power
The need for financial viability	Promoting competition
Managerial freedom of infrastructure providers	The need for accountability
Costs of congestion	Capacity expansion
Environmental concerns	Economic considerations
A desire for accessibility	The costs of achieving it
Needs of remote communities	The costs of providing access
Efficiencies in grain handling and transportation	Impact on communities
Federal powers and jurisdiction	Those of provinces and municipalities
Private car use	Urban transit
Corporate property rights	The public interest

For public infrastructure, the Panel sought rules and practices to foster an efficient balance across modes, along with mechanisms to promote efficient levels of public investment, efficient management and use of the infrastructure, and user charges that reflect investment costs. Accountability and management of infrastructure were important concerns in all modes. The Panel looked for policies and mechanisms to ensure that the presence of differing levels of public expenditures on different modes does not distort efficient use of those modes. This was the principle first laid out in the MacPherson report, and national transportation policy has continued to evolve in this direction. The Panel believes it is the correct direction, and we explore ways of extending this principle to roads and urban transportation while also taking into account the need to provide infrastructure for low-density markets.

In sum, while the Panel is comfortable with the central objective guiding Canada's national transportation policy for the past few decades, many issues require balance. There are trade-offs between efficiency and other goals. There are trade-offs between the benefits of regulatory intervention and the costs that accompany it. In the remainder of this report the search for the appropriate balance is apparent in many situations. The Panel does not have all the answers but endeavours to shed light on how national transportation policy and legislation should be amended to deal with these considerations.

Notes

[1] The initial studies that received wide attention were by D.A. Aschauer, "Is Public Expenditure Productive?" *Journal of Monetary Economics* 23 (1989), 188–200; and "Does Public Capital Crowd Out Private Capital?" *Journal of Monetary Economics* 24, 171–188.

Chapter 4
Competitive Rail Access: Issues Defined

Many aspects of freight rail policy are the subject of controversy. This chapter begins by outlining the essentials of the system and noting the basic differences in policy perspective among interested parties.

Pricing Practices for Freight Rates

The *National Transportation Act, 1987* freed railways and their customers to negotiate charges and conditions for moving products, except for grain. The practice railways use to negotiate and establish prices has become one of the more contentious issues in the user/carrier relationship.

Termed 'differential pricing', it is the railways' practice of recovering the common costs of their network by charging different percentage mark-ups, over and above identifiable costs, depending on the responsiveness of shippers' demand for services to changes in freight rates. The result is that some users pay more than others to ship a given quantity of goods over a given distance.

Shippers that are especially dependent on rail — mainly bulk commodity producers — complain that differential pricing, when combined with the lack of competitive alternatives, results in their paying higher freight rates. Some shippers contend that the existence of differential pricing is evidence of a lack of competition.

Railways maintain that differential pricing is essential to recovering total costs and ensuring network sustainability, maintaining rail service to the largest number of shippers, and giving shippers of the least competitive traffic the lowest rates possible. In its defence, they cite both economic theory and the practice of other industries.[1]

Competition

Canada's railways face a far more competitive marketplace today than 30 or 40 years ago. Railways have seen a slow but inexorable decline in their total share of the freight transportation market, although they retain a considerable advantage in transporting bulk commodities over long distances.

The Evidence on Competition in the Rail Freight Sector

Although railways face effective competition overall, as suggested by the substantial downward trend in average freight rates and pass-through of railway productivity gains, there may be markets where competitive forces are not as effective. This box summarizes key results from data gathered on the extent of competition in the rail freight sector. Sources include the Panel's survey of shippers. For a detailed discussion of the data and findings, see the background paper on this subject on the CD-ROM accompanying the report.

Intermodal competition. The data suggest that the amount of rail traffic actually contestable by truck is limited:

- Large volumes of resource-based bulk commodities are moved by rail in particular geographic areas for which trucking is not an option.
- It may be technically feasible to move half the rail freight by truck, but this does not mean that trucking is a cost-effective alternative for this traffic.
- Trucks and railways each have inherent cost advantages, depending on the distances over which goods are transported.

Intramodal competition (direct). The data suggest that the potential is considerable:

- An estimated two-fifths of Canadian rail traffic has access to direct rail competition. This is traffic that originates and terminates within 30 kilometres of points of interchange with a competitive railway. Moreover, this is likely to be the minimum amount of traffic with direct access.
- For grain traffic, the corresponding estimate is 24%. However, almost two-thirds (64%) of grain traffic originates and terminates within 100 kilometres of a competing railway.

Intramodal competition (indirect). Results from the survey of shippers suggest that this exists only for some markets:

- The survey of shippers confirmed some presence of market competition but could not quantify the impact on rates or service.
- A small number of rail shippers indicated that for some facilities they were able to use a different carrier by shipping to or from a different destination or by using a substitute product.

Market competition. This does not appear to have had a significant overall influence, but there may have been effects by individual commodity, such as coal:

- Between 1987 and 1998, changes in export prices do not appear to have been a dominant factor influencing changes in freight rates.

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Competition in the markets served by the railways takes various forms; the distinctions between them take on considerable importance in the Panel's examination of the extent of rail competition. Three types of competition are relevant for this discussion:

- **Intermodal competition**, where the shipper has an effective competitive choice in another mode, such as trucking or marine.
- **Intramodal competition**, which can be direct or indirect. Direct competition means the user has access to more than one railway at the same location or is given the functional equivalent of that access through regulatory provisions. Indirect competition is more complex and takes many different forms. The simplest example is where a shipper can move a product by truck to gain access to another railway.
- **Market or source competition** refers to instances where a carrier's freight rates can be influenced by the amount of competition the shipper faces from producers (using other railways) elsewhere in the country, or from foreign producers. Market competition also includes 'geographic' competition, where a shipper can send, via another railway, the same product to a different destination or get inputs from a different source. 'Product' competition exists where a shipper can avoid using a particular rail carrier by shipping or receiving a substitute product.

Rail Access Provisions and Competition

Rail access generally refers to one railway (the guest railway) operating trains over the tracks of another railway (the host). This could be a voluntary arrangement, resulting from commercial negotiation, or could arise from legislation or a regulatory decision. Access can also occur when a railway on whose lines a shipper is situated (the local railway) is required to deliver the shipper's traffic to an interchange point with a competitor railway at a negotiated or regulated rate.

Track access (operating trains over a host railway's tracks) also takes different forms. Access could be limited to running rights — permission to move traffic from one place to another — or might include broader 'traffic solicitation rights', where the guest railway is also permitted to compete directly with the host by soliciting business on the host's line.

The *Canada Transportation Act* contains two competitive access provisions: interswitching and competitive line rates (CLRs). Interswitching dates back to the early 1900s. CLRs, on the other hand, have been part of the regulatory framework only since 1987.

There is a connection between the adequacy of the rail access provisions and the extent of competition; the challenge is to define the nature of that connection and to develop a policy solution that serves all interests.

Some shippers believe that prevailing conditions (limited or non-existent commercial options) make them subject to non-competitive, even monopolistic behaviour. From their perspective, an obvious solution lies in greater access to allow for more competitive shipping options.

Railways believe there is inter- and intramodal competition, so that very few shippers are truly 'captive', and even those that are do not face unduly high rates. From their perspective, increased access would threaten their long-term ability to survive as commercial entities and thus undermine the rail transportation system generally.

Existing Regulatory Instruments

Interswitching

(*Canada Transportation Act*, sections 127–128)

A shipper with access to only one railway at the origin or destination of a haul can have the shipment transferred to another carrier — interswitched — at prescribed rates if the origin or destination is within a 30-kilometre radius of an interchange point.[2] The rates last prescribed by the Canadian Transportation Agency were set to cover the average variable cost of performing interswitching, plus a 7.5% contribution to railway fixed costs.

Shippers told the Panel that interswitching is generally effective in promoting competition and fostering efficiency. For their part, the railways say that current interswitching rates make an inadequate contribution to fixed costs.

Running Rights

(section 138)

This provision allows federally regulated railways (including U.S.-based railroads operating in Canada) to apply to the Agency for running rights over the lines of any other federal railway.

The National Transportation Agency (in existence from 1988 to 1996) dealt with three requests for running rights in 1991: two were rejected on jurisdictional grounds, while the third was withdrawn before the Agency made a determination.

Under the *Canada Transportation Act*, there had been no applications for running rights until February 2001, when two were made. The applications are discussed in Chapter 5.

A broad spectrum of rail users told the Panel that restricting the availability of running rights to federally regulated railways limits the provision's utility in promoting competition. On the other hand, nearly all the railways argued that a broadened running rights provision would threaten the long-term viability of rail infrastructure and reduce rail operating efficiency. Several provinces opposed altering the existing running rights provision. Other provinces favoured expanded running rights.

Competitive Line Rates
(sections 129–136)

A shipper located outside the 30-kilometre interswitching limit can ask the Agency to establish a competitive line rate (CLR) for moving goods over the originating railway to an interchange point for transfer to a connecting railway. As a precondition, the shipper must first reach an agreement with the connecting carrier for the balance of the movement. Several additional restrictions are attached to the use of CLRs: they cannot be used at both the origin and the destination and they cannot apply on more than 50% of the route or 1,200 kilometres, whichever is greater. The Agency bases the CLR on a combination of the applicable interswitching rates and the revenue the railway generates in moving the same or substantially similar commodities over similar distances. A CLR lasts one year unless the shipper and carrier agree otherwise.

CLRs were introduced in the *National Transportation Act, 1987* and amended in the *Canada Transportation Act*. In the period 1988–1992, the National Transportation Agency established five CLRs: four in consecutive years were for the same shipper, and all five permitted access to U.S. mainline railways. Since the Act came into force in 1996, the Agency has received no requests for CLRs.

Shippers maintain that the precondition and restrictions on using CLRs constitute an effective barrier to the relief they believe the provision was intended to give them. As well, they point to two general restrictions on obtaining relief from the Agency (discussed later in this section under *Legal Provisions Determining Agency Relief*).

For their part, the railways suggest that CLRs are used mainly as negotiating levers rather than as a means to correct justifiable rate concerns. Moreover, they contend that the Agency's rate-setting methodology is flawed, since actual rail network costs are not fully compensated.

Level of Service Obligations
(sections 113–116)

Railway companies must provide "adequate and suitable accommodation" for the carriage of traffic. A shipper that believes a carrier has not met this service obligation can file a complaint. After review, the Agency can order the railway to fulfil the obligations in a manner, and within a time period, the Agency deems proper. Since 1996, the Agency has received 18 level of service complaints.

Shippers maintain that level of service obligations are the foundation for existing and any future competitive access provisions. Lower rates that might result from Agency relief are of little value without assurances of adequate service. Also, some shippers see delays — resulting from the Agency's inability to issue interim *ex parte* orders on level of service disputes — as undermining the provision's effectiveness.

Right to a Rate
(sections 118 and 121–125)

A shipper that wants to move traffic, over either a single line route or a joint route operated by two or more railway companies, can ask the company or companies to issue a rate for moving the traffic. If the company refuses (in effect declining the business), the Agency can order the company to publish a rate. If the rate is for a joint route, the Agency can also apportion the rate between the railways.

Since 1988, the Agency has received only one such request and ordered the railway to set a rate between an origin and destination determined by the shipper.

Final Offer Arbitration
(sections 159–169)

Final offer arbitration (FOA) is available to shippers as a means of resolving disputes with carriers over rates or conditions of service. The process involves an independent arbitrator reviewing the final offers of the shipper and the carrier and deciding in favour of one or the other. The parties to an FOA can, and often do, keep the details of the arbitration confidential.

Twenty-three FOAs have been initiated since 1988 when the provision first came into force — most of them since 1996. The Panel heard that more than half the matters submitted for arbitration were settled by the parties before the end of the arbitration hearing, suggesting that the availability of FOA is an incentive to reaching a negotiated settlement.

Although some shippers see FOA as an effective dispute resolution mechanism, the extended time and expense involved in what amounts to a complex legal procedure have been criticized. The FOA process was amended recently as part of reform of the grain handling and transportation system; now a quicker FOA process is available for disputes involving freight charges of less than $750,000. Both shipper and carrier must file final offers simultaneously, instead of the shipper filing before the carrier. There is not yet enough experience with the new regime to know whether perceived faults have been corrected.

The mainline railways suggest that the FOA process gives shippers, having already negotiated rates in good faith, a further chance to reduce rates at no risk. They want to see FOA replaced by standard commercial arbitration.

Confidential Contracts
(section 126)

Since 1987, shippers and railways that agree on rates and service conditions have been permitted to do so in a confidential contract. Before the NTA 1987, all rates had to be published. As well CN and CPR were permitted to set rates collectively. The effect was that CN and CPR acted together to compete against other modes of transportation; they tended to compete against each other on the basis of service rather than price.

The NTA 1987 began the process of freeing the rail freight business to act on a more commercial basis, where confidential contracting is the norm. Most rail traffic now moves under confidential contracts. Some shippers expressed dissatisfaction at being unable to compare carriers' rates.[3]

Revenue Cap on Western Grain Rates
(sections 147–152)

As part of the package to reform the western grain handling and transportation system that came into effect on August 1, 2000, railway revenues are subject to a cap — total revenue for moving grain in any crop year (August 1 to July 31) cannot exceed a set amount, based on volume and length of haul.

In effect a replacement for the previous highly regulated rate regime, the cap was to allow flexibility in grain transportation rates while simultaneously giving protection to farmers by constraining the total revenues the railways could capture from moving grain.[4]

With 2000–2001 being the first applicable crop year, there is very little experience from which to draw conclusions. However, neither shippers nor carriers have expressed satisfaction with the new rules. Differential pricing is permitted, albeit within the cap. Some parties allege that carriers are recovering forgone revenues by other means. Others say the expected rate reductions have not materialized. For their part, the railways see the cap as arbitrary and unwarranted.

Legal Provisions Determining Agency Relief

The Act contains conditions or tests that must be met before the Agency can grant an applicant's request. Two provisions figure prominently.

Substantial Commercial Harm
(sections 27(2) and (3))

To grant relief, the Agency must be satisfied that the applicant would suffer "substantial commercial harm" if the relief were not granted. Shippers believe the provision constitutes an undue burden and an effective barrier to the relief the Act is supposed to provide. Carriers argue that the test is appropriate and prevents shippers from securing regulated remedies in situations where competition is already present.

Commercially Fair and Reasonable
(section 112)

This provision states that any rate or tariff established by the Agency must be "commercially fair and reasonable to all parties". Shippers see the test as an unacceptable barrier to relief.

Rail Freight Carriers and Users

The Economic Environment

Financially, the railways have made significant strides in the past few years, with the strong North American economy playing an important role. Many rail users, on the other hand, particularly rail-dependent shippers of bulk commodities like coal and grain, have experienced financial difficulty stemming from market conditions particular to their own sectors.

Keenly aware of this dichotomy, the Panel identified two issues in its interim report: the economic prospects facing the sectors served by the railways and whether the current financial situation of the rail industry is sustainable over an entire business cycle. Critical to an assessment of these questions is an understanding of the evolving economic environment in which shippers and railways operate. In the fully commercial system that has developed, the economic prospects of railways and users are inextricably connected; in this environment a key consideration is the sustainability of the favourable economic conditions of the past few years.

Bulk commodity producers, whose fortunes are so vital to the railway industry, have experienced considerable difficulty in recent years, the main problem being excess global capacity, causing heavy downward pressure on many commodity prices. These problems are not new. In inflation-adjusted terms, the prices of Canada's natural resource-based exports have been in decline since the 1970s.

With transportation costs a major component of the delivered price of bulk commodities, important consequences flow from continued pressure on non-oil resource prices: producers will continue to look for ways to reduce total transportation costs, so Canada's rail transport system must be as competitive and efficient as possible.

Public Policy, Regulation and the Rail Transport Sector

The transformation of Canada's railway industry over the past three decades had four distinct sources:

- a change in regulatory philosophy, articulated in successive pieces of legislation;
- the federal government's withdrawal from direct involvement in the industry, both as owner of Canadian National Railway and as provider of subsidies to regions or transport sectors;

- implementation of two North American free trade agreements; and
- the response of railway management to the commercial freedom provided by the new regulatory and policy environment.

As discussed in Chapter 2, regulatory change occurred in three stages. The *National Transportation Act* of 1967 greatly increased commercial rate-making freedom, enabling the railways collectively to compete more effectively against other modes. The 1987 law eliminated collective rate making and introduced confidential contracts, enhancing and encouraging rate and service competition among railways.

The *Canada Transportation Act* of 1996 focused mainly on operational issues, most significantly giving railways greater latitude to rationalize their physical infrastructure. Barriers to the discontinuance of rail lines were lowered, and the establishment of short line railways was encouraged. By 2000, CN and Canadian Pacific Railway accounted for less than two-thirds of the rail trackage in Canada — much reduced from before — and a sizeable short line industry had come into being.[5] Since 1996, both CN and CPR have concentrated on becoming high-density, mainline carriers, much as their U.S. counterparts had done in the early 1980s.

The impact of trade liberalization following the Canada-U.S. and North American free trade agreements was far-reaching, accelerating North American economic integration, spurring Canada-U.S. trade, and playing a lead role in Canada's economic expansion. From 1993 to 1999, Canadian exports to the U.S. grew by 13% a year and now acount for 87% of all Canadian exports. Imports from the U.S. grew by 11% annually over the same period.[6]

The evolving operational structures of CN and CPR reflect these economic and regulatory trends. Both railways have pursued strategies to strengthen their position in the U.S. market and create links onward into Mexico. Building on long-held U.S. subsidiaries and more recent acquisitions, CN and CPR are now integrated corporations on a continental scale. Transborder traffic and traffic moving within the continental U.S. now account for about half of their total revenues. CN and CPR have effectively become North American companies domiciled in Canada.

Operational and Financial Performance

Traffic Volumes

As the Canadian and world economies have expanded, so has railway traffic volume. Traffic growth has been sluggish, however, proceeding at less than half the rate for overall industrial production. According to Statistics Canada, growth in railway industry traffic, measured in both tonnes and tonne-kilometres, amounted to only 0.8% per year between 1988 and 1999; since 1996, when economic growth has been robust, tonnes carried has grown by 1.5% per year and tonne-kilometres by 1.7% per year.[7]

The explanation lies in the rail industry's continued dependence on the bulk commodity sector. Because of its inherent service flexibility, trucking has benefited more than rail from growth in the new economy, despite significant efforts by railways to attract a greater share of high-growth, high-value traffic. As well, trucking has been the main beneficiary of growing north-south flows.

Freight Rates

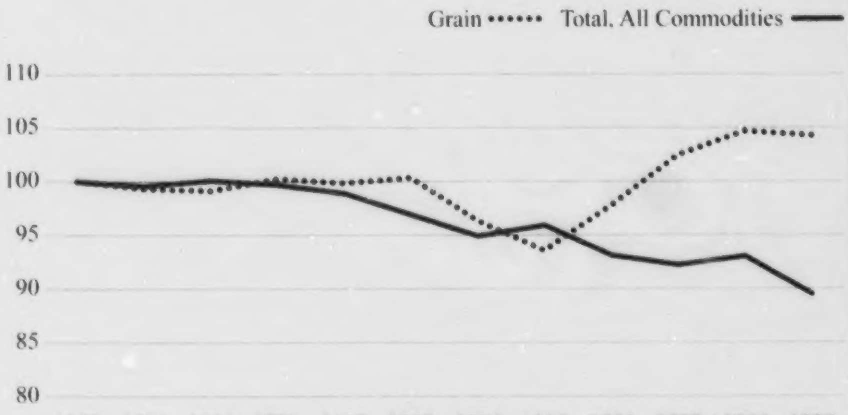
Elimination of collective rate making and introduction of confidential contracts in 1987 put considerable downward pressure on freight rates. As measured by average revenue per tonne-kilometre, average freight rates have declined significantly since 1987.[8] For example, Transport Canada indices show that average revenue per tonne-kilometre declined by 10% in nominal terms and 26% in real terms between 1988 and 1999 (using the GDP deflator to adjust for inflation).[9]

Transport Canada's indices also provide information for various commodity groups. There are significant differences between groups, but the average freight rate indices show that rates for the decade beginning in 1988 declined or were stable for every commodity group except grain — the only regulated commodity (Figure 4.1).

These figures do not reflect the experience of all shippers. It is possible, for example, that a decline in average rates for a particular commodity group reflects falling rates for a relatively small number of large shippers and increasing rates for a greater number of shippers with smaller volumes. It was in part to fill this information gap that the Panel conducted a survey of shippers.[10]

Transport Canada Indices of Railway Revenue per Tonne-Kilometre: Grain and All Commodities Figure 4.

current $, 1988 = 100



Freight rates for grain bear a closer look because their course is tied directly to changes in regulation. From 1988 to 1995, rates for transporting grain declined, with most of the downward movement between 1993 and 1995. In 1995, new legislation altered the regulatory regime, eliminating grain costing reviews and allowing inflation adjustments. Since then, grain rates have climbed to a level higher than at any point in the last decade. Rates might decline again, however, under the revenue cap enacted in 2000.

Operating Revenues

The combination of sluggish volume growth and declining average rates has resulted in little growth in railway operating revenue since the late 1980s (Figure 4.2). The effects of the business cycle are reflected in revenue levels, especially during the early 1990s recession and late '90s recovery. Railway operating revenue in 1999, a peak year for the economy, was not much above its level in the late 1980s, the previous peak period.

Productivity Growth

The standard measure of railway fixed plant productivity is traffic density, usually measured by gross ton-miles per mile (or tonne-kilometres per

The Measurement and Behaviour of Rail Freight Rates

Rail freight rate behaviour was a matter of sharp controversy during the Panel's review. The key results of the Panel's investigation are summarized here. A background paper (on the CD-ROM accompanying the report) explains the data and presents a detailed discussion.

Transport Canada indices. Revenue per tonne-kilometre (R/TK) indices show stable or falling freight rates on average across all major commodity groups except grain between 1988 and 1999. The indices are designed to avoid some of the statistical problems associated with the use of raw R/TK data.

- The freight rate index for total traffic declined by 10% in nominal terms and 26% in real terms between 1988 and 1999. Raw R/TK data show the same result, suggesting no significant change in overall traffic mix or length of haul.
- Between 1988 and 1999, the indices declined or were essentially stable for all commodity groups except grain, with major declines for chemical and petroleum products and iron and steel.
- There was a major decline in the index for 'other bulk' commodities (which includes coal, potash, iron ore and non-ferrous metal ores and concentrates) between 1995 and 1999, primarily because of coal.
- After declining by 7%, the index for grain increased by 11% between 1995 and 1999, reflecting elimination of grain costing reviews and regulation with an inflation adjustment, as well as removal of subsidies. This result also excludes any change that may be associated with the new revenue cap.

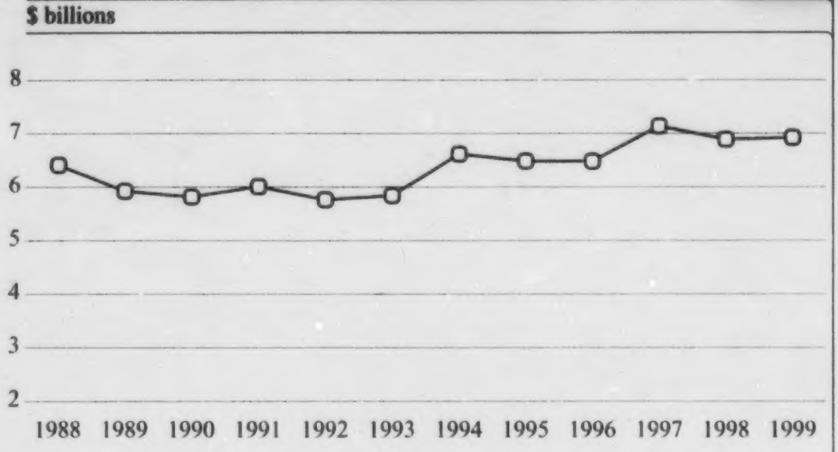
Panel's survey of shippers. Respondents to the survey — 47% of domestic carload users, 58% of transborder carload users, and 57% of intermodal users — said they had experienced freight rate increases over the period 1995–2000. The sample was small, however.

The results include shipper experience in 2000, which the Transport Canada indices do not. It may also be that a large number of small shippers are experiencing rate increases, but overall these are offset by declines in freight rates on larger-volume movements.

Pass-through of productivity gains. The evidence shows that a substantial portion of railway total factor productivity gains of recent years were passed on to shippers — about 40% between 1995 and 1999. Over the period 1988–1999, an estimated 75% of the gains in total factor productivity were passed through to shippers. The considerable pass-through of productivity gains suggests the presence of substantial competition, overall, in rail markets.

kilometre) of track operated. Over the past decade, traffic density has grown by about 80%, with most of the gains occurring since the mid-1990s and implementation of the *Canada Transportation Act*.

– 2



Canadian Railway Freight Operating Revenue 1988–1999

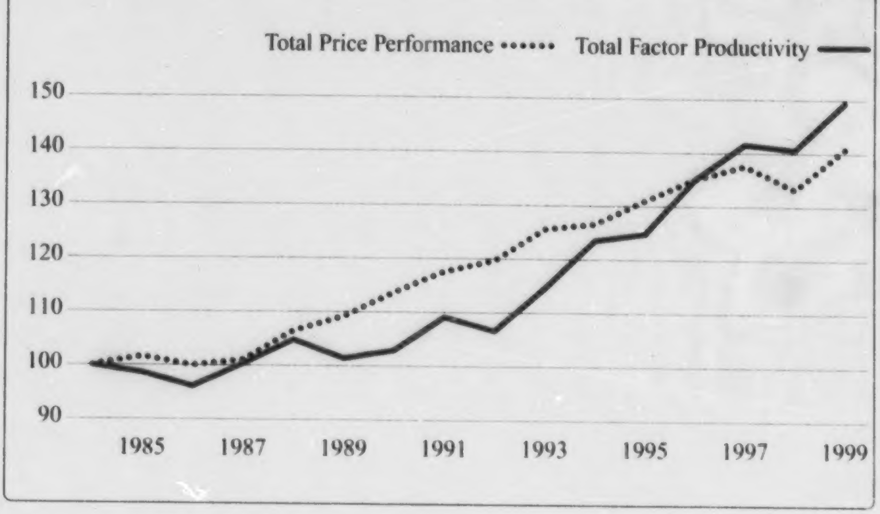
Source: The Railway Association of Canada, *Railway Trends*, various issues.

Revenue ton-miles per employee is the most common measure of labour productivity. In contrast to the surge in fixed plant productivity engendered by the Act, improvements in labour productivity have been more gradual.

Gains in traffic density and labour productivity are significant, but both chart output relative to just one input used in the production process and so do not provide a complete picture. A more appropriate measure is total factor productivity (TFP), calculated as the ratio of an index of all rail output to an index of all inputs.[11]

Between 1988 and 1999, the TFP of Canada's railways increased by 43% — with more than half the gain occurring since 1995 (Figure 4.3). The average sharing of productivity gains can be tracked by comparing TFP with a measure of input prices paid relative to output prices received, or total price performance (TPP). As railways face increased input prices, they must increase output prices, but competitive pressures limit their ability to do so. Productivity enables firms to absorb increased input prices. Comparing TPP and TFP shows both productivity and the extent to which that productivity is passed through, on average, to customers. Tracking TPP shows that before the mid-1990s, rail productivity was not sufficient to offset declines in average rail prices relative to prices paid for inputs, and railways were weakening financially. Between 1988 and 1999, about 75% of the productivity

Railway Productivity and Price Performance
1984 = 100



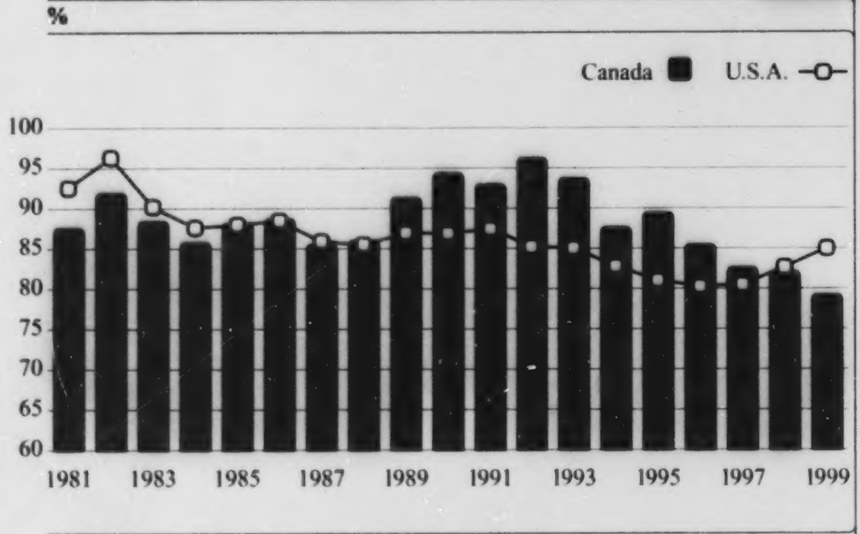
gains achieved were passed on to shippers. In more recent years, railways have retained a greater proportion — about 60% since 1995. Whether this trend will continue remains to be seen.[12]

Financial Performance

Profitability in the 1990s: The railways' significant progress in improving bottom line performance is evident in several indicators. A key statistic, long used to assess financial performance in transportation, is the operating ratio — operating costs as a percentage of operating revenues (Figure 4.4: since operating costs are the numerator and operating revenue the denominator, a decline in the ratio corresponds to an improvement in operating profitability.) In the space of nine years, 1991 through 1999, the combined operating ratio of Canada's two Class I freight railways improved from levels well over 90% to below 80%.

Also of significance, and evident in Figure 4.4, is how Canadian railways have improved their performance relative to that of their U.S. counterparts. Through much of the 1990s, U.S. operating ratios were routinely better than those of the Canadian Class I carriers. By 1999, however, this gap

Canadian and U.S. Rail Operating Ratios (excluding special charges)



Source: Canada: railway filings with Canadian Transport Commission/National Transportation Agency/Canadian Transportation Agency and Statistics Canada. U.S.: Association of American Railroads and railway filings with Surface Transportation Board.

had closed, and Canada's railways posted results better than those of the U.S. companies.[13]

Profitability Compared to Other Industries

It is also instructive to compare railway profitability with that of other industries. Here too, different indicators are relevant; each has its own methodological limitations, but the measures are in broad agreement. Using either return on capital employed or return on equity, the conclusion is clear: even with the record results of recent years, railway profitability is comparable to but certainly not greater than that of other Canadian businesses (Table 4.5).[14] At the same time, the response of the investment community reflects a positive outlook on the way railways are being managed in the face of present and future challenges.

Rail Capital Expenditure Sustainability

The Panel's mandate included consideration of the overall effectiveness of the current legislative and regulatory framework in sustaining the high levels

Return on Capital Employed

	2000		Five-Year Average 1996–2000	
	%	Rank	%	Rank
CN	15.39	286	11.81	265
CPR	14.85	300	NA	NA

Return on Equity

	2000		Five-Year Average 1996–2000	
	%	Rank	%	Rank
CN	14.43	279	14.74*	147*
CPR	15.89	234	NA	NA

NA – not available.

*Reflects one-time recognition of income tax benefits of $774 million in 1996 following privatization.

Source: The Globe and Mail, Report on Business, The Top 1000, July 2001, advance data. CPR rates of return computed according to the *Report on Business, The Top 1000* definitions and ranked as though it was a publicly traded company.

of capital expenditures required to enhance productivity and promote innovation. At the same time, there is an important overlap between capital expenditure sustainability and competitive rail access. Measures to enhance competitive rail access could have an impact on capital expenditure sustainability, an issue the Panel identified in its interim report.

Concern about capital expenditure sustainability arises from a simple reality. A study undertaken for the Panel estimates that the Class I freight railways will need to make capital investments of about $1.3 billion in each of the next five years just to renew depreciating assets.[15]

Historical Capital Spending

Figure 4.6 summarizes the railway industry's net capital investment between 1955 and 2000.[16] It shows how challenging capital sustainability will be: in 27 of the 44 years shown, the railways invested less than the level needed just to maintain their capital stock. In the decade between 1985 and 1995, the rail system's capital depreciation exceeded investment every year by a figure

Rail Freight Carriers and Users — Highlights

- The succession of legislative and regulatory reforms begun in 1967 and accelerated in 1987 and 1996 is responsible for the resurgence of the Canadian railway industry and its renewed ability to provide efficient and effective services.
- Gains in operational efficiency and financial health came about through major improvements in productivity spurred by reorganization and rationalization.
- Railway profitability is comparable to but no greater than that of other Canadian businesses. These results are recent, however, and were achieved in a period a high economic growth generally.
- Financial results at CN and CPR compare well with those of their U.S. counterparts.
- The shippers on which railways depend most — bulk commodity producers — have been under considerable financial pressure recently, chiefly because of long-term decline in non-oil bulk commodity prices.

A central question facing policy makers is whether the current, comparatively favourable circumstances of railways can be sustained. Railways' current health is a recent phenomenon, and rail's ability to weather an economic downturn in its current configuration is untested. Public policy changes and the economic boom helped create the current situation, but their effects must inevitably run their course.

Productivity and profitability gains may be harder to achieve in the future than they were in the past. Large cost savings were achieved by reducing miles of track and numbers of employees. New efficiencies may have to be found in less immediately fertile ground — improved management of existing physical and human assets and capital investments in technology and infrastructure.

ranging from $100 million to $700 million; 1997 was the first year since 1985 that investment exceeded the level of depreciation.

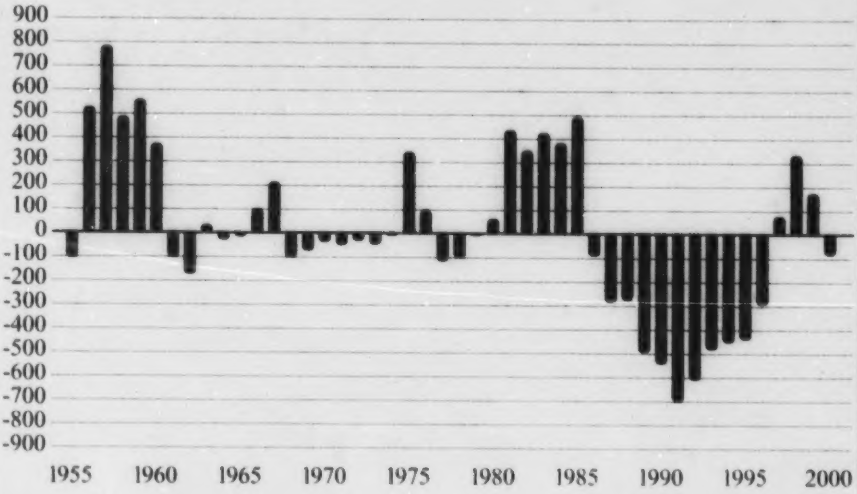
This uneven pattern of investment occurred in the context of railways' unique characteristics as capital users and change in the policy, legislative and regulatory regime.

Railways are among the most capital-intensive businesses. Capital invested in railways is relatively immobile for the short and medium term. This provides a significant barrier to the entry of new competitors on specific corridors and injects an element of caution into significant new investments by existing companies. However, it also permits large profit gains as traffic density rises.

There is also a considerable lag between the time capital is invested (or assets are depreciated) and when productivity improvements (or evident decay in the system) occur. Railways could be subject to years or even decades of

Net Railway Capital Investment

$ 1992 millions



Note: Net Capital investment = Capital investment – straight line depreciation.
Source: Statistics Canada Cansim Series D832520, D832528; The Conference Board of Canada.

under-investment before obvious system failure; likewise, years of sustained investment are usually required to make up for past neglect.

Impact of the Regulatory Environment

Each successive public policy milestone influenced the railways' ability to obtain capital. The *National Transportation Act, 1987* opened the railways to rate competition but did not allow them to dispose easily of unprofitable lines or otherwise restructure, so that costs remained high. Combined with the economic downturn in the early 1990s, capital spending fell well below levels of depreciation and stayed there for the next decade.

When CN was privatized by the *CN Commercialization Act* of 1995, it suddenly gained shareholders who expected a return on their investment. For the first time, CN had to address the same cost-of-capital price signals as its main competitors, and the government was no longer the guarantor of debt. That year also saw an end to most federal subsidies to shippers. With few exceptions, railway revenues would now come from shippers hiring their services at commercially negotiated rates. Since then, the share price response has reflected confidence on the part of investors that the railways are being managed successfully.

The next milestone, the *Canada Transportation Act* of 1996, allowed railways to dispose of rail lines as business, not regulated, decisions. The positive impact on the bottom line was felt immediately and has continued, assisted by a buoyant economy. The mainline railways shed unprofitable lines, increased traffic density, and rehabilitated operating ratios from near-disastrous levels, in the process turning unattractive commercial investments into plausible ones. The Act's new approach to rail line disposal effectively stimulated the short line industry.

Since 1996, the mainline railways have made significant new investments in their systems, with almost all the funds coming from revenues and relatively little from the debt and equity markets.[17] Unlike other modes, railways own almost all the infrastructure they use. Since the government's withdrawal from rail ownership and most subsidies, railways and their investors have been the only sources of new capital for maintenance or expansion.

Capital Uncertainties

Economic Prospects

With cash flow as the predominant source of capital for railways, the availability of capital is extremely sensitive to both overall economic demand and sectoral variations. Current medium-term forecasts generally see overall economic growth continuing. Although railways should be able to continue to fund investment from cash flow, certain risks — emanating from the economic and competitive circumstances facing bulk commodity shippers, the possibility of an extended economic slowdown, or more modest economic changes such as shifts in the mix of traffic being moved — could cause unanticipated reductions in revenue.

Investment Beyond Maintenance Levels

The $1.3 billion for annual capital investment mentioned earlier covers only straight-line depreciation; it does not allow for normal volume growth, major improvements in productivity or new technologies. The character of railway investments changed significantly in the late 1990s, as compared to the previous decade. A large proportion of more recent spending was in areas such as information systems and new locomotives and freight cars. This trend is likely to continue. Much of the railways' productivity gains in the mid- to late 1990s came mainly from rationalizing infrastructure. Finding opportunities for further rationalization will be more difficult. Future productivity improvements are far more likely to arise from significant and sustained investment in new systems, equipment and innovative technologies.

Ability to Attract Investors

The Class I freight railways have only recently approached performance figures in line with those of their U.S. counterparts and other businesses. They will be challenged to demonstrate that they can perform adequately through less robust economic times.

The Policy Environment

Canada's rail freight industry has emerged only recently from a tight regulatory embrace. Because the financial health of the rail sector is recent as well, the future legislative and regulatory environment takes on additional importance from the perspective of potential investors. How the government addresses the cluster of policy issues — potential rail mergers, taxation, proposals for rail access, and the grain regime — will all feed into investor calculations about CN and CPR.

Short Line Railways and Capital Investment

An important by-product of the *Canada Transportation Act* was a short line rail sector that has evolved to become a vital element of the national rail freight system. Short line operators are important to customers because they offer choice in access or access where the alternative was no rail line at all. In addition to providing some local service, short lines are also important to mainline railways as feeders and collectors connecting to their own higher-density operations. Large rail company or small, the capital sustainability issue is the same: as inherently intense consumers of capital, railways need to be able to maintain an investment pace sufficient to maintain system performance and enhance productivity.

In comparison with CN and CPR, the nature of the short line industry and its limited history make a solid understanding of capital sustainability more elusive. However, by their nature, many short lines are low-traffic-density operations. Profits are marginal.

Very little direct information is available on capital spending by short line railways. For the most part, however, short lines need to invest in track renewal and upgrading. Many are already engaged in such programs. In the coming decade, short lines will need to replace or rebuild many of their locomotives. The most challenging capital expenditures facing short lines in the coming years are those required to upgrade track structures to handle the new mainline standard of 286,000-lb. freight cars. Many short lines lack the traffic base to accommodate such investments, and it remains to be seen what will happen to railways that cannot afford to upgrade to handle heavier cars.[18]

As with the Class I railways, the principal source of funds to renew short line assets is future earnings. Potential investors look for a diverse traffic base, reasonable prospects for growth and a solid relationship with a long-haul rail partner.

Some short lines have reported traffic increases since taking over from CN or CPR and have developed long-term reinvestment plans. Others have faced financial crisis because an important shipper has closed operations, or because of unanticipated and unavoidable major expenses. Still others can eke out a profit sufficient to stay in operation but are unlikely to survive in the longer term if essential spending cannot be funded and operating capacity degrades. In a few instances, capital renewal is not commercially justified, but municipalities — sometimes in conjunction with shippers — have stepped in to maintain a railway line while contracting out day-to-day operations to a short line operator.

Absent sufficient funds generated directly from revenues or investors, the options are few. Provincial governments have provided some capital funding for short lines. Saskatchewan, Ontario and New Brunswick have provided some assistance with start-up costs or directed funds to specific projects. Quebec has a program to match private investments in short line capacity rehabilitation and expansion. Another potential source of funds is the long-haul partners, though this option has yet to make itself felt to any significant degree.

Conclusions

Economic and Financial Prospects

Inherent in the task of providing policy guidance is the need to anticipate future circumstances and events about which only prudent guesses can be made. One of the biggest unknowns is the financial prospects for the railways and their users. Canada's Class I freight railways are viable commercial firms for the first time in many decades. The railways' most important customers are operating under severe financial constraints, however, and will likely continue to do so. Railway revenues from those sources appear to have little upside room. Meanwhile, in their current configuration as fully commercial enterprises, the railways have prospered in the comparatively easy circumstances of a strong economy. A responsible regime must anticipate that the railways' revenues and profits will fluctuate as the wider economy follows the inevitable business cycle.

A second note of caution stems from understanding that a large proportion of the railways' productivity gains of recent years came through one-time cost shedding and restructuring of physical assets. Future efficiencies may come more slowly and at a higher investment cost.

The Panel's message is that policy makers and legislators can count on neither large reservoirs of railway profits nor great gains in operational efficiency to maintain an effective, competitive rail system. Balancing user demands for lower rates with the railways' need for revenues sufficient to maintain the system will not be easy. The Panel believes that the overarching policy goal should be to build on the new-found vigour of the rail system, target the problems that persist, and resist sweeping measures that hold the potential to create more difficulties than they solve.

Capital Sustainability

The Panel believes that Canada's mainline railways are now well positioned to make the capital expenditures needed to sustain and improve their systems, a finding that could not have been made a decade ago.

The last few years have seen a significant surge in capital investment. The railways have sensed an improved investment climate, with CN privatization and the *Canada Transportation Act* providing freedom to manage assets. Capital expenditure sustainability must be evaluated over the whole business cycle, however.

Another important influence is taxation. There are two issues: taxation of railways compared to other industries, and rail taxation levels in Canada compared to those in the United States.

Railways face the same income tax rates as other industries, but questions have been raised about capital cost allowances for amortizing investments. The latter are particularly important in comparing taxation in Canada and the U.S. For example, rail cars and equipment are depreciated more slowly in Canada. Railways are also subject to municipal property taxes and fuel taxes levied by provinces. This is relevant in comparing taxation levels for railways and road transport. Because road infrastructure is publicly provided, no equivalent of property tax is paid on that infrastructure. Road users pay fuel tax, but it is widely regarded as a user charge for road infrastructure, whereas provincial taxes on rail fuel have no such rationale.

A number of studies conclude that railway taxation levels are higher than levels for other transport modes and higher in Canada than in the U.S. The competitiveness and profitability of Canadian railways would be enhanced by a more level playing field. Taxation is not the responsibility of the Minister of Transport, but it is an outcome of policies of all three levels of government that adversely affects rail relative to other modes.

The issues of differential pricing and competitive access cannot be separated completely from the issue of capital sustainability. The Panel urges care in addressing pricing and competition issues. In considering competitive access proposals, their impact on capital expenditure sustainability must be weighed carefully. There is ample evidence in both Canada and the United States that poorly crafted regulatory policies can threaten capital sustainability, ultimately damaging the very parties the policies were designed to help. The profits and capital expenditures of recent years can not be used as an excuse to alter the balance unreasonably between shipper and railway interests. Indeed, in the long run, the interests of railways and shippers are the same.

Concerning the short line sector, it is evident that whatever shortfall there might be in capital formation, significant modifications to the current regulatory regime do not offer a solution. The ability of short lines to generate sufficient capital depends almost entirely on their success in generating sufficient traffic and revenues, not on one or another of the regulatory instruments now available or proposed. The Panel notes, however, that individual short lines may be more vulnerable than the mainline railways to the financial impact of any single regulatory decision (especially regarding running rights or freight rates), since a short line's single shipper may account for as much as a third of the short line's total traffic.

Notes

[1] For a discussion of differential pricing, including its relevance to competitive rail access, see the background paper on the CD-ROM accompanying this report.

[2] Under certain circumstances — application by the shipper and subject to the 'substantial commercial harm' provision, the Act permits interswitching at distances greater than 30 kilometres.

[3] Where a confidential contract exists, the shipper is precluded from using FOA unless all parties to the contract agree. The terms of the confidential contract are binding on the Agency in the event of a level of service complaint.

[4] Previously, the Agency set a maximum rate scale based on the distance grain would be transported. The rate was adjusted annually to reflect changes in an index of railway costs.

[5] Transport Canada, *Transportation in Canada, 2000 Annual Report*, p. 81.

[6] *Transportation in Canada, 2000*, p. 63.

[7] In comparison, industrial production as measured by Statistics Canada increased at a rate of nearly 2% per year from 1988 to 1999 and 3.7% per year between 1996 and 1999.

[8] Average revenue per tonne-kilometre or per ton mile is a standard measure of the average rates railways receive from the sale of services.

[9] The trend in raw revenue per tonne kilometre data is corroborated by the indices developed by Transport Canada, which standardize the mix of commodities and length of haul and are designed to avoid the measurement problems associated with the use of raw revenue per tonne kilometre data. The Panel acknowledges that revenue per tonne kilometre is an imperfect measure. It can be affected not only by changes in freight rates but by changes in the mix between high-yielding and lower-yielding traffic, by changes in the length of haul, and by other factors. Despite these imperfections, the Panel believes the measure provides useful insight into overall rate trends. A full discussion of the issues relating to the measurement and behaviour of freight rates appears in a background paper available on the CD-ROM.

[10] The results are discussed in a background paper, available on the CD-ROM, in conjunction with a discussion of the Transport Canada freight rate indices.

[11] Total factor productivity for the Canadian railway industry is discussed at some length in the background paper on freight rates on the CD-ROM.

[12] This is discussed in greater detail in a background paper on the CD-ROM.

[13] Deterioration in U.S. railway operating ratios during the late 1990s period of high economic growth reflects difficulties resulting from mergers and restructuring.

[14] Return on capital employed is the ratio of operating income to average capital employed, where the latter is frequently defined as the sum of long-term debt (including the current portion) plus shareholders' equity. Return on capital employed has the advantage that the numerator, operating income, reflects the underlying income-generating capability of the business itself and is not affected by how the firm chooses to finance its operations through debt or equity. Return on equity is the most basic accounting measure of profitability, because it is the one most directly related to shareholder value creation, the main goal of the firm. Using return on equity as the basis of comparison between firms or industries is difficult, however, because it is affected by how the firm chooses to finance its operations, which can vary greatly, and also because return on equity reflects the numerous special and extraordinary items that can affect a firm's net income, as opposed to its operating income.

[15] The Conference Board of Canada, "The Effectiveness of the CTA Framework in Sustaining Railway Capital Spending", paper prepared for the Canada Transportation Act Review (CTAR), March 2001.

[16] These expenditures are net in the sense that the data in the figure represent the new investment after subtracting the consumption of railway assets as represented by depreciation. All data are expressed in constant 1992 dollars and represent depreciation considerably higher than what the railways report each year. Using embedded historical asset values will understate the capital expenditures required to replace assets as they are consumed. For example, an asset purchased 20 years ago for $100,000 would require considerably more than $100,000 to replace it today.

[17] The Conference Board of Canada, *The Effectiveness of the CTA Framework*.

[18] Research and Traffic Group, "Sustaining Capital Requirements for the Short Line Railway Industry", paper prepared for CTAR, February 2001.

Chapter 5
Competitive Rail Access and Shipper Protections: Recommendations

Proposed Options for Changing Rail Access

The Panel's interim report provided a full account of the views and proposals of interested parties on competitive rail access.

Proposals for rail access take two distinct forms — track access and rate access — though they are not mutually exclusive and can occur simultaneously. All the proposals have roots in the existing legislation.

Track Access Options

The first category, track access, generally involves one operating entity (the guest railway) running trains or rail cars on the rail network owned by another operator (the host) in exchange for a fee. All track access options involve a regulatory authority granting an operator the right to run trains on another's lines — so-called running rights.

Operators do run trains over each other's track networks at present; however, this results from commercial agreements reached voluntarily. The proposed options generally envisage regulatory involvement in determining both the extent of the guest railway's rights on the host's system and the amount of compensation the guest railway pays to use the host's network.

The significant change from the current situation is that implicit in all options is the potential for a broader range of operators to gain access to a federal railway's lines, possibly at an access price set by a regulatory authority rather than by commercial negotiations.

Rate Access Options

The second type of access proposal — rate access options — involves requiring an incumbent or local railway to carry the traffic of shippers located on its lines to an interchange point with another railway or connecting carrier at a regulated rate. These options are based on modifying the pricing structure of rates that railways charge shippers. Rate access options are also variations on existing legislation and practice: expanding the limits for regulated interswitching to distances beyond 30 kilometres and changing the competitive line rate provisions. This category of options can be considered less intrusive, and it creates less regulatory complexity than track access, since no option involves a carrier operating trains over the lines of another.

Observations on Proposed Rail Access Policies

To provide sound policy advice, the Panel had to achieve clarity about the issues at the core of the competing visions and establish a firm base of knowledge about the rail system, the economic environment, the financial circumstances of carriers and users, and the likely technical challenges.

The value of mandating an interim report on competitive rail access is now evident. After publication of the Panel's interim report, consultations continued. Although basic positions altered little (indeed, some have not changed in a generation), a key aim of the interim report — to clear the rhetorical thicket of competing claims and identify key issues — was realized.

Performance of the Rail System

In the Panel's view, Canada's rail freight transportation system works well for most users most of the time. The Panel's consultations with interested parties revealed consensus that the basic elements of a competitive and efficient rail transportation system are in place.

At one meeting with interested parties, the assembled group was asked to rank the system on a scale of one to ten, with one being completely dysfunctional and ten being perfect. The consensus ranking was between seven and eight. Though anecdotal, this conclusion is supported by the Panel's survey of shippers, and most available hard information also supports the view that the system works well in the main: Canada ranks with the U.S. at the top of international comparisons, and — as seen earlier — rail productivity has risen by nearly 50% in the last decade.

Extent of Competition System-Wide

Another precondition for framing policy guidance was an assessment of the state of competition: the extent to which shippers are subject to anti-competitive prices or other forms of market abuse. The difficulties in making definitive judgements on this based on hard data are many. The Panel is nevertheless confident in the view that Canada's rail system is not inherently anti-competitive; nor is market abuse systemic or widespread. Indeed, by all available indicators, most shippers in most markets in most parts of the country are well served.

Several technical and economic measures, read in combination, reinforce this conclusion:

- **Railway profits and financial returns:** With the improved financial results of recent years, railways rank among Canada's more profitable businesses. However, analysis of railway profitability, no matter how it is measured, provides no evidence that they are making excess returns.
- **Freight rates:** In aggregate, freight rates faced by shippers in all market categories except grain have either declined or remained static since 1988. A sizeable proportion of railways' efficiency gains in the 1990s was passed on to many categories of shippers in the form of lower rates.
- **Extent of competition indicators:** The available data reveal a rail system that is — within the economic constraints inherent in a high-cost industry operating in markets as diverse and dispersed as Canada's — reasonably competitive. When this evidence is considered alongside that regarding freight rates and railway profitability, the Panel does not see a rail system in need of sweeping regulatory measures to raise the level of competition.

The Panel believes, however, that there are cases where market forces are inadequate; in those situations, appropriate recourse is necessary to protect shippers against potential abuse of market dominance by a carrier.

Other Industries, Other Countries, Other Pricing Practices

In 1967 Canada began the transition from an under-capitalized, highly regulated, subsidized rail system to a commercially viable structure that provides better service at more competitive rates to the majority of users. The Panel's consultations showed little interest from any quarter in measures to reverse this course. Virtually all participants, even those with the most serious complaints, preferred commercial solutions to regulatory ones and, where regulation is necessary, targeted remedies to broad re-regulation.

Early in the mandate, the Panel undertook several assessments whose results add analytical weight to this caution about altering the existing legislative framework. Before formulating recommendations, the Panel needed answers to three questions:

- Are other network industries (natural gas, electricity, telecommunications) appropriate or relevant models for how the rail system could be restructured to increase efficiency and competitiveness?

- Are models for competitive rail access in other countries worth emulating in whole or in part?
- Is the current system railways use to set prices — variously termed differential, Ramsey or discriminatory pricing — inherently anti-competitive or otherwise so seriously flawed that it should be supplanted by some other practice?

Network Industries

Based on the perception that a rail system is technically and economically analogous to other network-type industries, restructuring of the natural gas, electricity and telecommunications industries has been suggested as a model for restructuring the rail network and engendering greater competition. In the Panel's view, these comparisons should be regarded with caution.

From a technical and operational perspective, railways are considerably more complicated than other network industries in terms of physical planning, co-ordination, safety, switching and administration. In many significant ways, railways are not industrial analogues of gas, electric or telecommunications utilities and cannot be treated as such.

There are important financial and economic differences too. Increased demand — in telecommunications and natural gas — and new low-cost technologies and sources of supply created space for new entrants. No such factors are at work in the rail industry: demand is static or rising slowly, and no innovative technologies offer the promise of greatly reduced costs or significantly new ways of doing business.[1]

National Railway Systems

The Panel heard frequent reference to steps in other countries — Sweden, Australia, and the UK were cited most often — to restructure their rail industries. The Panel's research on these and other examples indicates that none provides a very promising place to start remodelling Canada's rail system, for three broad reasons.

First, the major European countries and Australia began their railway restructuring to solve problems Canada's system does not have: government ownership, high levels of public subsidy, low productivity and rapidly declining shares of the freight market.

Second, open access policies in Sweden and the UK were designed to meet the demands of passenger traffic, with freight being secondary. In Canada the challenges are very different.

Third, in none of the countries examined have the results been what was hoped for. In the UK and Sweden, rail operations continue to be heavily subsidized. The Australian reforms, whether following the vertical separation model or not, have delivered some tangible benefits, but serious problems remain. In particular, the reforms have not resolved for Australia problems cited most often in the Canadian context as evidence of lack of competition.

Pricing Practices

There remains a serious divergence of perspective between shippers and railways on the matter of differential pricing. Some shippers — bulk commodity producers for the most part — see differential pricing as unfair and an abuse of market power. Railways see differential pricing as legitimate and essential to the long-term survival of their operations. Moreover, the railways believe differential pricing should be unfettered.

The Panel believes both are extreme views, not conducive to setting policies that will foster an efficient, effective and competitive rail system. The Panel rejects assertions that differential pricing should be unfettered. There are compelling economic and public interest arguments for putting some limits on its use or mitigating its more extreme effects. Similarly, the Panel rejects the argument that the existence of differential pricing is, in and of itself, evidence of a lack of competition. For a self-financing, unsubsidized network-type industry where non-allocable constant costs must be covered if firms are to survive, differential pricing improves efficiency. The only substitute would be a return to cumbersome rate regulation and possible heavy subsidies; these are notions Canada abandoned 30 years ago, and no one advocates their return.

Treatment of the issues surrounding differential pricing mirrors the Panel's approach to rail access generally. The recommendations are intended to foster a regulatory regime that identifies specific instances of potential market abuse or anti-competitive behaviour and provides focused and appropriate remedies.

Assessing Regulatory Viability

An important element in assessing access options is their viability as regulations that can be implemented practically and efficiently. Two factors loom as crucial tests for any change in rail access regulation: devising a sound scheme for compensating host railways, and appreciating fully the burden any new regulations might create.

Compensation for Access

The viability of any proposal for regulated enhancement of rail track access rests on devising a suitable and practicable compensation regime. A fee for running rights that is higher than warranted would bar competitors from gaining access to the lines of other companies and defeat the purpose of the provision. A fee that is too low, on the other hand, would induce the host railway to recover lost revenue either by raising rates for other shippers or cutting back on infrastructure maintenance and investment. An excessively low access fee could also effectively end up subsidizing less efficient operators.

The means of determining an access price is also significant, because it has the potential to substitute a regulatory decision for a commercial agreement. While some suggest that the access price could be set by commercial negotiation, with recourse to the Canadian Transportation Agency only if no agreement is reached, the Panel does not see this as very likely in a situation where access has been imposed. If running rights were non-consensual, it is difficult to envisage the disputing parties being of the same mind about what constitutes a fair or reasonable fee. It is far more likely, therefore, that the Agency or an arbitrator would have to set the access fee, or at least the ground rules for arriving at one — a significant reintroduction of regulation.

Increased Regulatory Burden

Legislative enhancements to rail access provisions can be expected to increase costs to both government — in the form of regulatory oversight — and to business — in the form of compliance and dispute resolution. The Panel believes that the anticipated results of new regulations must be weighed against the real costs they will entail.

Regulatory costs arise from several sources. A measure requiring a railway to take action it does not believe to be in its own commercial interests will more than likely be challenged — with costs for the disputing parties and the regulator. The U.S. experience shows that especially in challenges over running rights, fee negotiations often involved protracted and expensive dispute resolution. An additional cost to the regulator invariably arises after the dispute has been settled, in the form of compliance monitoring.

Finally, wholly new types of regulatory costs could arise from the imposed sharing of infrastructure under some access proposals. Such issues have arisen where other network industries have been opened to competition by regulatory means.

Considerations and Recommendations

The competitive rail access and shipper protections provisions constitute a set of obligations on railways and rights for shippers. Together, they are intended to condition the normal market relationship between railways and shippers by giving shippers a degree of countervailing power they would not otherwise have, to protect them from potential abuse in situations where the railways have market dominance.

Some of the rail access and shipper protection provisions are interrelated. Others stand alone or overlap. The Panel believes the legislative framework should incorporate a systematic approach that encourages commercial transactions before regulatory intervention is applied, that stages regulatory intervention so that the most intrusive intervention is applied only in situations where it is required, and that avoids overlapping provisions. The Panel considers the provisions and presents recommendations in the following order:

- Right to a rate and level of service obligations
- Interswitching provisions
- Competitive line rates
- Substantial commercial harm
- Commercially fair and reasonable rates
- Final offer arbitration
- Revenue cap on western grain rates
- Enhanced running rights
- Rail access pricing
- Regional railways
- Vertical separation
- Railway line transfer and discontinuance

Right to a Rate and Level of Service Obligations

Many shippers see the right to obtain a rate for moving traffic (section 118 of the *Canada Transportation Act* for movements by a single railway and section 121 for joint movements) and the level of service obligations placed on a railway when that traffic is shipped as the foundation on which competitive access provisions are built. As stated by the Canadian Shippers' Summit, "[w]ithout reasonable assurances of adequate rail service, rate levels are largely meaningless."

The Panel agrees. Level of service requirements, which define a railway's obligations, are essential; they allow for complaint to the Agency, with the Agency essentially determining whether the railway has fulfilled its obligations.

The Panel concluded, however, that the existing provisions are not as effective as they might be. Level of service is not properly defined in the legislation. A shipper using a published tariff rate does not necessarily have any assurance, in advance of shipping the freight, of the level of service that will be provided, particularly in respect of features such as timeliness and frequency of service. By contrast, in most commercial transactions, including confidential contracts between a railway and a shipper, the purchaser knows what service will be provided for the price charged. Although a railway must set a rate at a shipper's request, there can be a significant degree of uncertainty about what level of service is attached to the rate.

The Panel concluded that the confidential contract approach of specifying the level of service should also apply to tariff rates, reflecting a normal commercial approach. The level of service provisions (sections 113–115) would therefore be replaced by a requirement that a railway include in its tariffs the level of service it will provide in conjunction with its published rates. The final offer arbitration process would be available to shippers dissatisfied with either the rate charged or proposed to be charged or with the terms or conditions of service.

The Agency would continue to have authority to determine, on application, whether a railway had met its commitments and, in the event of non-compliance, to order the railway to take specific measures to meet these commitments. An aggrieved party could seek damages in a court of competent jurisdiction, as is now the case.

Recommendation 5.1
The Panel recommends that sections 113 to 115 of the *Canada Transportation Act* be replaced with a requirement that a railway publish in its tariff the level of service attached to rates in the tariff.

Recommendation 5.2
The Panel recommends that the Canadian Transportation Agency continue to have the authority to determine whether a railway has met the level of service commitments in a tariff or confidential contract and, in the event of a breach, to order the railway to take specific steps to meet those commitments.

Interswitching Provisions

Some participants in the Panel's consultations, especially in the West, called for expanded interswitching limits. Interswitching allows shippers within 30 kilometres of an interchange with another carrier to have their traffic transferred from one rail carrier to another at a regulated rate. The rate is based on the system average costs of the railways for such switching movements and includes a fixed contribution to constant costs. All shippers are entitled to take advantage of the regulated rates, regardless of market conditions or a shipper's competitive options. Interswitching rates originated in an era of rate regulation; they were designed to avoid overbuilding in urban areas and to ensure that a joint through rate could be calculated quickly and easily. Today, interswitching rates are advocated as a means of achieving competitive access.

In the Panel's view, expanding the interswitching limits would worsen the market-distorting aspects of the interswitching rate regime and would be a step backward. The proposal ignores market conditions and the averaging effects of a fixed rate — all shippers pay the same rate, regardless of their circumstances. Although interswitching rates have long been a feature of the regulatory landscape, the Panel sees them partly as an anomaly, representing a trade-off between regulation and the market. On the other hand, they induce an element of competition between connecting railways. The Panel is not convinced that upsetting this balance in favour of further regulation would serve the interests of shippers or Canada.

Government should be involved in regulating commercial relationships only when one party is abusing monopoly power. Proposals to extend the interswitching limit assume that railways are behaving in this manner.

No evidence before the Panel suggests this kind of market power exists in every circumstance where expanded interswitching would be available. In any event, the Act already allows the Agency to deem that the origin or destination of traffic is within 30 kilometres of an interchange, if it believes, in the circumstances, that the origin or destination is reasonably close to the interchange. This, along with other existing and proposed measures, would deal more adequately with the potential abuse of market power.

> **Recommendation 5.3**
> **The Panel recommends that the existing interswitching limits be retained.**

At the same time, the Panel notes that the legislative provision requiring the Agency to determine fixed interswitching rates is a structural flaw that should be amended. It makes no sense to deny shippers and railways the opportunity to negotiate interswitching charges that are lower than the Agency's interswitching rates, where commercial considerations permit.

> **Recommendation 5.4**
> **The Panel recommends that section 128 of the Act, requiring the Canadian Transportation Agency to determine fixed interswitching rates, be amended to allow the Agency to prescribe maximum rates, leaving it open to shippers and railways to enter into commercial arrangements for lower interswitching rates, if appropriate.**

Competitive Line Rates

Competitive line rates (CLRs), first introduced in 1987 and subsequently amended in the 1996 legislation, allow a shipper served directly by only one railway and located outside the 30-kilometre interswitching limit to ask the Agency to establish a rate for transporting goods over the originating railway to an interchange point for transfer to a connecting railway. The CLR is calculated based on the current interswitching rate, plus system average revenue per tonne-kilometre for moving similar traffic over similar distances, if possible. As a precondition for obtaining a CLR, a shipper must have concluded an agreement with the connecting carrier to move the traffic. Access to CLRs is also limited to shippers that can meet the "substantial commercial harm" test of sections 27(2) and (3).

CLRs, like other mechanisms designed to enhance competition, inspire sharply divergent views among shippers and carriers. On one hand, railways have maintained historically that CLRs are an unwarranted intervention in the market. They also suggest that CLRs are used principally as a negotiating tool, rather than a means of correcting justifiable rate concerns, and that the Agency's formula for CLRs does not reflect railway prices adequately. On the other hand, shippers argue that too many barriers prevent them using this mechanism to obtain competitive prices.

The National Transportation Act Review Commission recommended several refinements to make CLRs fairer and more functional. The ensuing legislative amendments did not result in greater use of CLRs, however. CLRs came to the fore again during the Panel's consultations, with shippers claiming that three key barriers to effective use of CLRs remain:

- the precondition of an agreement with the connecting carrier;
- the requirement to prove substantial commercial harm if the remedy were not granted; and
- the condition of "commercially fair and reasonable rates".

The Shippers' Summit offered a proposal, drafted originally by the Canadian Fertilizer Institute, to replace the CLR provisions with a competitive access rate or CAR.[2] As envisioned by the Summit, CAR would allow the originating or local railway and the connecting carrier to compete at the interchange for the traffic over the long haul. It would allow the shipper to determine what portion, if any, of the business would go to each railway in a dynamic framework of negotiations. Finally, the rate to the interchange would be based on the existing interswitching rate for the first 30 kilometres of the movement, plus an additional amount based on the railway's system average revenue per tonne kilometre for moving the commodity at issue. This would eliminate two of the current methods the Agency can use to calculate a CLR.[3] The Shippers' Summit argues that this would allow the Agency to establish a CAR quickly, predictably and without the need for a hearing.

To the shipper, CAR's main strength is that it has the potential to increase competition significantly by eliminating the need for a prior agreement with a connecting carrier and the requirement to prove substantial commercial harm. Assessments of its impact on rail system efficiency are inconclusive, however. CAR advocates say it would encourage the most efficient routing of traffic. This may be true in certain circumstances, but it is not clear that it would always be the case. Furthermore, adopting CAR as proposed would make all traffic potential multiple line routings, with their added inefficiencies relative to single-line movements.

CAR as proposed would have broad application, since it would be available to any shipper served by only one railway, regardless of other competitive realities. Similarly, the proposed calculation method would make it attractive to shippers whose rates are above average, regardless of the numerous factors determining those rates. These elements are inconsistent with the Panel's goal of providing remedies only where warranted by inadequate market forces.

Finally, because CAR is based on system average revenues, successive applications would have the effect of reducing the average, thereby further reducing rates subsequently established under the proposed formula. This, combined with overly wide applicability, could set in motion a dynamic process that would drive railway revenues down to the point of affecting viability.

The Panel concluded that the risks of adopting CAR as proposed were too high — it would undermine a commercial rail market and lead to the substantial adoption of regulated rates based on average revenues. The Panel nevertheless sees merit in the basic premise of CAR and CLR — that is, creating a rate to connect with a second carrier — as an effective instrument for promoting competition in what are commonly referred to as 'bottleneck' situations. An alternative, which the Panel suggests be designated a Competitive Connection Rate (CCR), would achieve the same objective at reduced risk by targeting the remedy better.

To begin, the existing condition requiring a prior agreement with a connecting carrier should be eliminated. This would address a key shortcoming that apparently restricts shippers' access to the present remedy. Because the originating carrier would not necessarily lose the traffic to the connecting carrier, it would also discipline the originating carrier to encourage efficiency gains to retain the traffic. The provision should also be targeted to shippers with no effective competition to move their goods and should do so in a more direct manner than applying the substantial commercial harm test, whose relevance the Panel addresses later. In place of this test, the Panel proposes that CCR be available only to shippers with no "alternative, effective, adequate and competitive" means of transporting the goods that are the subject of the CCR. These are the words that currently guide arbitrators in FOA cases; in FOA proceedings, the Panel was told, arbitrators apply this consideration effectively. In such a case, where a shipper believes that a rate a railway proposes to charge constitutes an abuse of market dominance, the shipper can apply to the Agency for a CCR for movement of the traffic to the nearest interchange with a connecting carrier.

In reviewing the rate, the Agency would compare the rate paid by the shipper (or offered to the shipper) with rates paid by other shippers of the same commodity under similar circumstances. In general, the Panel believes that where a shipper without competitive alternatives is paying rates substantially above the rates paid by all shippers of a specific commodity under similar conditions and the situation cannot be explained by apparent cost and value of service considerations, a case could be made for the Agency to require a CCR. Where the Agency does conclude that a CCR is required, the railway and the shipper would be given a period of no more than 30 days to negotiate a new rate, either to the interchange or for the entire movement. If no new rate could be negotiated, the Agency would establish a CCR from the origin to the point of interchange (or from the point of interchange to destination) with the connecting carrier using the methodology set out below.

The simplest way to do this would be to use system average revenue per tonne-kilometre, but the Panel explicitly rejected this method, because the resulting rate would do more than remove the unreasonable portion of the rate, in effect unreasonably transferring revenue from the railway to the shipper.

The Panel concluded that a reasonable balance would likely be achieved by calculating CCR using rates in the range of the 75th percentile to the 90th percentile of revenue per tonne-kilometre for movements of the same commodity over distances similar to the CCR portion, together with the interswitching rate for the first 30 kilometres.[4] This would ensure that CCR is available to shippers that are paying rates at the upper end of the scale to move a particular commodity while reducing the risk associated with any downward spiral of pricing based on average revenue per tonne-kilometre.

As is generally the case with a formula, there is a possibility that the result will treat the shipper or the railway unfairly. When identifying the traffic whose revenue will be used to calculate CCR, the Agency will need to ensure that it compares like with like in terms of traffic, distances moved, level of service provided and conditions of carriage. All are elements of price discrimination with which the Panel agrees; it is not price differentiation *per se* that the Panel wishes to address through CCR, but rather the abuse of railway market dominance where it exists.

To illustrate, if the Agency were determining a CCR for high-priority movements of metallurgical coal in railway-supplied cars, it should avoid using revenue figures for lower-priority movements of thermal coal in shipper-supplied cars. The parameters of the latter movement would exert unjustifiable downward pressure on the rate — low-priority service would have a lower value of service and a lower rate than high-priority service, thermal coal rates may be lower than those for metallurgical coal rates, and rates for movements in shipper-supplied cars would be lower to reflect the shipper's investment in equipment. As well, because of rate taper, revenue per tonne-kilometre would be lower for longer movements than for shorter ones.[5] In extreme situations — for example where a CCR applied over a very short distance on a high-cost line — calculating a CCR using revenue figures for much longer movements could result in a rate that not only provides an inadequate contribution to constant costs but is also below the variable cost incurred by the railway. Any of these parameters could result in a CCR that is unfairly low for the railway. In other situations, the result could be a rate that is unfairly high for the shipper. The Agency should therefore retain the ability to adjust the rate resulting from application of the formula where the results are clearly unreasonable.

In applying the Panel's recommended CCR formula, the Agency must be mindful of all these elements and exercise its discretion under section 112 of the Act, which requires that the rate it sets be "commercially fair and reasonable to all parties".

As noted earlier in this chapter, the Panel believes the legislative framework should avoid overlapping shipper protection provisions. For this reason, the Panel recommends that a shipper seeking a CCR not be permitted to request FOA, for either the portion of the movement by the connecting carrier or the CCR itself. In addition, a shipper seeking a CCR should not be permitted to request FOA where the Agency has determined that the rate complained of does not merit the establishment of a CCR while that rate is in force. Similarly, a rate established pursuant to an FOA would not be eligible for review under the CCR provision. This would give a shipper the choice of either CCR or FOA but not allow two regulatory interventions on the same movement.

The existing CLR provisions also allow only one CLR on a traffic movement — CLRs are not available at both origin and destination. Similarly, CLRs cannot apply to more than 50% of the distance the traffic moves, or 1,200 kilometres, which ever is greater. The purpose of these restrictions is to minimize the use of regulated rates. The Panel favours commercial agreements and relationships between railways and shippers and therefore recommends no change in these restrictions under the CCR process.

The Panel is confident that this CCR proposal presents no significant risk of threatening the overall financial viability of the railways. In the event of unforeseen consequences that threaten railway viability, however, the Governor in Council should have the authority to suspend the CCR provision. A similar provision was included when CLRs were first enacted in 1987, but the Governor in Council has never been required to use it.

Recommendation 5.5

The Panel recommends transforming the competitive line rate provisions of the *Canada Transportation Act* into competitive connection rate (CCR) provisions by

- **removing the requirement that shippers obtain an agreement with a connecting carrier before requesting the rate from the Canadian Transportation Agency;**
- **making the remedy available only to shippers with no "alternative, effective, adequate and competitive" means of transporting the goods that would be subject to the rate and where the Agency determines that the rate is substantially above rates paid by other shippers of the specific commodity under similar conditions and that cannot be explained by apparent cost and value of service considerations;**
- **requiring the shipper and the railway to attempt to negotiate a new rate within a 30-day period after the Agency determines that a CCR is required;**
- **requiring the Agency, where the shipper and carrier do not agree on the rate, to establish a CCR, subject to the commercially fair and reasonable test of section 112, with the rate falling in the range of the 75th percentile to the 90th percentile of revenue per tonne-kilometre for movements of the same commodity over similar distances and under the same conditions and levels of service as the CCR portion, together with the interswitching rate for the first 30 kilometres;**
- **allowing for a CCR to be established by the Agency for a period of one year;**

- **prohibiting the shipper from requesting final offer arbitration of any rate being reviewed or established under the CCR process;**
- **prohibiting the shipper from requesting final offer arbitration for the portion of the movement by the connecting carrier;**
- **prohibiting the shipper from requesting a CCR for a rate established by final offer arbitration; and**
- **giving the Governor in Council authority to suspend the CCR provision if it determines that railway viability is seriously affected by the operation of the CCR provision.**

Other Provisions

Substantial Commercial Harm

The substantial commercial harm test became part of the Act in 1996. It was designed to ensure that only shippers that would suffer substantial commercial harm would be entitled to relief under the Act. Although the test applies broadly, in practice its real impact is on rail shippers, and then only in respect of certain remedies under the Act: competitive line rates and level of service, right to a rate, and extended interswitching limits.[6] Regulated rate and revenue provisions, such as interswitching rates and the grain revenue cap, are not affected, since they do not require a shipper application. Nor is the most frequently used shipper relief provision — final offer arbitration — subject to the test. Nevertheless shippers and others, including the Competition Bureau, criticized the substantial commercial harm test, in particular its focus on the shipper's financial and operating condition.

The test focuses on the effect on the shipper, rather than the behaviour of the carrier. For this reason the Panel believes that the substantial commercial harm test should be repealed.

> **Recommendation 5.6**
> **The Panel recommends that the substantial commercial harm test in sections 27(2), (3) and (5) of the *Canada Transportation Act* be repealed.**

Commercially Fair and Reasonable

This provision (section 112) was also added to the Act in 1996. It was intended to provide guidance to the Agency, to ensure that rail rates or conditions of service it established were commercially fair and reasonable to all parties. Several parties suggested that the requirement is an unwarranted barrier to Agency relief. The Panel believes, however, that without such legislative guidance, a reasonable process of establishing a rate may yield an unreasonable result in some circumstances. For example, a rate based on single-car movements in railway-supplied cars could unfairly penalize a shipper seeking to have traffic moved in large blocks in shipper-supplied cars. Similarly, requiring a railway to provide service below its variable cost could unfairly penalize the railway.

The Act's shipper protections, modified in accordance with the Panel's recommendations, would give the Agency the authority to establish two types of rates — interswitching rates and CCRs. The Panel believes that where the Agency establishes rates under these provisions, the existing regulatory guidance should be retained.

> **Recommendation 5.7**
> **The Panel recommends that the Canadian Transportation Agency, when establishing interswitching rates and competitive connection rates, continue to be guided by the requirement that rates it establishes be commercially fair and reasonable to all parties.**

Final Offer Arbitration

The FOA provisions, introduced in 1987, allow a shipper dissatisfied with a rate or condition of service associated with a movement of goods to submit the matter for final offer arbitration. Since 1996 the provisions have applied to western grain and northern marine re-supply; they were also made available to commuter and passenger rail operators. Despite this broader application, FOA has been used most often by rail shippers.

The Panel believes that the FOA provisions have two important hallmarks of effective economic regulation:

- First, the arbitration process encourages parties to reach commercial settlement of their disagreement by its all-or-nothing approach.
- Second, the provisions require the arbitrator to assess whether the shipper has alternative, effective, adequate and competitive means of transporting goods, implying that where markets work, they should be left to work.[7]

Some carriers suggested replacing FOA with commercial arbitration. This suggestion ignores the fact that FOA exists to provide relief to shippers that find themselves without alternative, effective, adequate and competitive means of transporting their goods. The Panel finds it difficult to believe that a commercial arbitration scheme would provide effective relief to a shipper in these circumstances.

Railways claim that shippers that proceed with FOA are free to walk away if they are dissatisfied with the result. This argument ignores two points:

- First, shippers must undertake, as part of the application for FOA, to ship the goods in question in accordance with the arbitrator's decision.
- Second, since the arbitrator, when considering disputes in excess of $750,000, considers whether a shipper has alternative, effective, adequate and competitive means to transport goods, it is unlikely that a shipper would endure the complexity and expense of FOA in circumstances where competitive options are available.

There are continued concerns about the complexity and expense of FOA. The Panel notes, however, that much of the complexity stems from the requirement that each side in an FOA know the other side's case (a requirement of natural justice) and from the value of rate disputes, which the Panel understands often exceeds $1 million. More simplicity in these matters could result in greater risk of inaccuracy and unfairness.

On balance, the Panel is satisfied that the FOA provisions, including the new simplified process for lower-value disputes, adequately address the problem of carrier dominance and potential abuse in a way that is fair to both shippers and carriers. Rail shippers have found FOA effective in obtaining relief, and the process is generally working well and as intended. One apparent anomaly should be addressed, however. When handling a dispute for matters over $750,000, an arbitrator must consider whether a shipper has alternative, effective, adequate and competitive means to transport the goods. There is no such requirement when dealing with disputes under $750,000. The Panel sees no reason why this requirement should not apply to the arbitrator's decision in such cases as well.

Recommendation 5.8

The Panel recommends that an arbitrator be required, in every arbitration, to consider whether a shipper has alternative, effective, adequate and competitive means to transport the goods that are the subject of the arbitration.

Revenue Cap on Western Grain Rates

Since the winter of 1996–97, considerable effort has been devoted to reform of the grain handling and transportation system in western Canada. Despite consensus that the system should be placed on a more commercial footing, agreement on the precise nature of reform has remained elusive, notwithstanding the excellent work of the Honourable Willard Estey and Mr. Arthur Kroeger. For the Panel, the issue is rail competition as it affects all shippers, including shippers of grain.

The regulatory process recommended in this report is designed to be adaptable to all circumstances of market abuse. The Panel sees no reason, therefore, why grain transported by rail should be treated any differently than other commodities. Furthermore we are concerned that the current crisis in the grain industry results in part from failure to move quickly enough to a system where commercial forces are allowed to work.

The Panel notes that when the *Western Grain Transportation Act* was repealed in 1995 and replaced with a cap on grain rates, the legislation contemplated the eventual sunsetting of the special regulatory regime for grain rates.

> Recommendation 5.9
>
> **The Panel recommends that the grain handling and transportation system be moved to a more commercial basis, which could lead to repeal of the revenue cap on grain rates.**

Enhanced Running Rights

Running rights have been a feature of Canadian railway legislation for more than a century. In most cases, they are voluntary commercial agreements between railways. The Agency can impose running rights, however, on application from a federally regulated railway. The Agency can grant running rights, subject to conditions it sets, having regard to the public interest. After granting running rights, the Agency can set compensation if the two railways are unable to agree.

The statutory authority for non-voluntary running rights can be traced back to the *Railway Act* of 1888, which allowed a railway to apply to the regulator to take possession of, use or occupy any lands belonging to any other railway company "for the purpose of obtaining a right of way... and for obtaining the use of tracks, stations or station grounds of another company".[8] Appearing under the heading "Taking of Lands" until it was transferred from the *Railway Act* to the *National Transportation Act, 1987*, the provision was seen mainly as something similar to expropriation of property. Although railways had general expropriation powers for land, the powers were not available to acquire land from another railway; hence the need for the provision. It was also to avoid duplication of railway construction where existing lines could be used. The section was considered an extraordinary recourse and received conservative application. Notably absent were references to the provision being a measure to increase competition.

The experience of the Agency and its predecessors with the provision reflects this. Most applications did not deal with running rights, but rather with occupying the property of another railway. For example, in 1905, the Guelph and Goderich Railway company sought land from the Grand Trunk Railway in Goderich, Ontario, that was not used by the latter railway.[9] In 1988, VIA Rail sought an order to possess, use and occupy CPR's railway maintenance facility at Victoria, B.C. In the latter half of the twentieth century, the regulator ordered no running rights, and traffic solicitation rights — an important element of running rights if the provision had been considered a means to enhance competition — were neither requested nor granted.

The National Transportation Agency did receive four running rights applications in the late 1980s. Its decisions on two of those applications confirmed that the law allows only federally regulated railways to apply for running rights. This raised the question now facing the Panel — whether the law should be amended to broaden its application. This is particularly significant in light of development of the short line railway industry; many short lines are provincially regulated and thus precluded from applying for running rights.

In February 2001, the Canadian Transportation Agency received two running rights applications. The first, from Ferroequus Railway Company Limited, sought running rights on about 2,000 kilometres of CN lines from North Battleford, Saskatchewan, to Prince Rupert, B.C. The second, from the Hudson Bay Railway Company, a subsidiary of OmniTRAX Canada, sought running rights on a network of approximately 3,500 kilometres of CN branch lines and mainlines in Saskatchewan and Manitoba. Both applicants have certificates of fitness as federal railways and both sought the right to solicit traffic on the CN lines over which they proposed to operate.

The applications appear to be the first instances where traffic solicitation rights have been sought as part of a running rights order. Whether traffic solicitation rights are contemplated under the *Canada Transportation Act* was a matter of considerable debate between the parties to the applications. CN, the infrastructure owner, asserted that traffic solicitation rights are inconsistent with the Act's regulatory framework and that the running rights provision allows only 'transit rights'. The railways seeking running rights asserted that the Act allows for traffic solicitation as part of a running rights application. On May 3, 2001, the Agency determined that the Act as now constructed does not empower the Agency to grant running rights for the express purpose of soliciting as well as carrying the freight of shippers.

What the Panel Heard

The Canadian Shippers' Summit argued that the running rights provisions do not promote a competitive rail system even though competition is the Act's clearly stated objective. Changes are therefore required, and expanding the availability of running rights is a critical part of the Summit's proposed legislative reforms to increase competition between railways. The Summit asserted that railways are no longer considered public utilities that need to be protected; they should be subject to the same competitive pressures as shippers.

The concept of expanded running rights was also supported by the provinces of Saskatchewan and Manitoba, the Canadian Wheat Board, the Competition Bureau, and two regional carriers, BC Rail and OmniTRAX.

CPR adamantly opposes legislating expanded running rights, suggesting that access proposals would give shippers lower rates only at the expense of the mainline railways. CN for its part urged caution suggesting that increased rail access would have to adhere to certain core principles such as reciprocity and commercially negotiated access fees. The railways also observe that expanded running rights would inevitably reduce efficiency, since more trains would be hauling essentially the same amount of traffic.

Running Rights to Enhance Competition

Running rights do not appear to have been designed originally to enhance competition. As is the case with any instrument called upon to perform a function it was not designed for, there are inevitably difficulties in applying the provision; the current debate highlights these difficulties.

There may be circumstances, however, where it is appropriate for running rights to be used as a means of enhancing competition. The Panel believes, therefore, that the Act's running rights provision should be transformed into a competitive access provision where circumstances require it. The Panel emphasizes that granting running rights as a measure for enhancing competition should continue to be an extraordinary step — imposed only where there is clear evidence that the railway providing the service is not acting in the public interest.

Transforming the running rights provision into a competitive access tool can be accomplished by several legislative amendments.

Applications for Running Rights

Only a federal railway can apply for a running rights order over the lines of another federal railway. The growth of the short line industry since 1996, made up mostly of railways not under federal jurisdiction, means that a significant segment of the railway sector is barred from even making an application.

There appears to be no valid reason to distinguish between a federally regulated railway operator and one that is provincially regulated, provided both meet the same operating safety standards, are adequately insured, and have adequately qualified personnel. The running rights provision should therefore be extended to all qualified railway operators, whether they have a federal certificate of fitness or are licensed as a railway by a provincial authority.

> **Recommendation 5.10**
> **The Panel recommends that any railway operator, whether under federal or provincial jurisdiction, have the right to apply to the Canadian Transportation Agency for running rights, provided the operator meets all necessary operating and safety standards and is adequately insured.**

Traffic Solicitation

If running rights are to become a competitive access provision where circumstances require, then traffic solicitation privileges must be included in the provision.

> **Recommendation 5.11**
> **The Panel recommends that the running rights provision of the *Canada Transportation Act* be amended to allow an applicant to seek traffic solicitation rights.**

Negotiations

The Act does not require a potential guest railway to negotiate with the infrastructure owner before applying to the Agency for running rights. In fact, it is the Panel's understanding that such negotiations have not been common — in many cases, applications for running rights have not been preceded by meaningful commercial negotiations.

Running rights require a continuing working relationship between the infrastructure owner and the guest. Myriad interactions between them help ensure that railway operations, including scheduled and unscheduled maintenance, are carried out safely and promptly. Communication between rail traffic controllers, track maintenance forces, and operating crews is critical — with no room for error. An adversarial relationship makes effective communication and co-operation much more difficult to achieve. Nor is it realistic to expect a regulator to oversee day-to-day interactions or be a referee.

As a general principle, the Panel favours commercial agreements and commercial relationships between railways and applicants for running rights and between railways and shippers. Negotiations aimed at agreeing on many elements of the interaction between a guest and a host railway provide a sound foundation for an enhanced running rights process. Experience in the United States, however, has been that commercial negotiations often prove difficult in imposed access situations.

The Panel therefore concludes that a potential guest operator should notify the infrastructure owner that it intends to apply for a running rights order. Like the notice shippers give carriers under final offer arbitration, this would allow the parties to enter into best-effort commercial negotiations to resolve as many issues as possible before the Agency deals with the application.

> **Recommendation 5.12**
> **The Panel recommends that a railway operator proposing to apply to the Canadian Transportation Agency for running rights be required to advise the infrastructure owner at least 60 days before making the application to encourage negotiations between the parties.**

Public Interest Test Considerations

Many proponents of enhanced running rights support a reverse onus public interest test. Under such a test a host railway opposing a running rights application would have to establish that granting the remedy would not be in the public interest. The Shippers' Summit suggested that

> by placing the onus on an opponent to a running rights order to demonstrate that the order is not in the public interest, effect will be given to the pro-competitive intent of expanded running rights while conferring discretion upon the Agency to deny an order where appropriate.[10]

Similarly, the Western Canadian Shippers' Coalition suggested a reverse onus approach

> to facilitate the granting of running rights applications as a pro-competitive remedy rather than retaining the status quo which is widely perceived as an extraordinary remedy.[11]

The Panel believes that imposed running rights should continue to be seen as an extraordinary measure, granted only where the public interest demands it. Given the exceptional nature of running rights, especially where traffic solicitation rights are sought, the Agency must continue to be satisfied that the granting of an application is in the public interest. Consequently, the Panel rejects the concept of a reverse onus test.

The Act allows the Agency to grant running rights, subject to conditions it sets, having regard to the public interest. The legislation does not define the public interest, however — a policy gap the Panel finds problematic. The regulatory body should have policy guidance on the criteria for and factors to be included in determining the public interest. In the absence of guidance, the process for considering running rights requests could be lengthy, open to legal challenge and expensive, hampering the provision's effectiveness.

Significant public interest considerations include the potential impact of granting running rights on all users and shippers on a line, the impact on system efficiency, the possible need to require reciprocal access on the applicant's lines where applicable as a condition of obtaining running rights, the ability of the guest operator to provide service into the future, and the impact on the financial viability of the host railway. In making its public interest determination, the Agency should be directed to take all these elements into consideration.

Such considerations will permit the Agency, as part of its public interest determination, to receive input from all interested parties on a line and decide whether the public interest is best served by granting running rights or by maintaining existing protections (interswitching, CCRs, FOA).

Recommendation 5.13

The Panel recommends that, as part of its public interest determination on a running rights application, the Canadian Transportation Agency consider, at a minimum,

- **the adequacy of existing service,**
- **the existence of competitive alternatives,**
- **the impact on all users and shippers on lines where running rights are sought,**
- **the impact on system efficiency,**
- **the financial and operational capability of the applicant,**
- **the willingness of the applicant to allow reciprocal access to its lines where applicable, and**
- **the impact on the financial viability of the infrastructure owner.**

Carrier Obligations and Shipper Protections

Under the Panel's recommendations, the Act would continue to place obligations and restrictions on federally regulated railways, including the obligation to publish a rate on request by a shipper, the obligation to specify the level of service in a published tariff or confidential contract, and a restriction on how the railway can limit its liability for loss or damage of a shipper's goods.

The Panel believes that these same obligations and restrictions should apply to guest operators with traffic solicitation rights. There is no compelling reason for a guest operator to be exempt. In fact, only by including this requirement will the provision become a competitive access provision. That being the case, any shipper on a line could request a rate and level of service package from the infrastructure owner or the guest operator and select the package that best meets the shipper's needs.

The Panel therefore concludes that guest operators with traffic solicitation rights must be subject to the obligation to establish rates at the request of a shipper and to publish them in tariffs and have the right to enter into confidential contracts with shippers. Once a guest operator contracts with a shipper, the guest operator must be required to provide the level of service set out in its tariff or in the contract with the shipper for that traffic. The Agency would have authority to determine whether the operator had met its commitments. In the event of non-compliance, an aggrieved party could seek damages in a court of competent jurisdiction, as is now the case for federally regulated railways. Finally, the guest operator would be able to limit its liability for loss or damage to that traffic only in accordance with section 137 of the Act.

Recommendation 5.14
The Panel recommends that guest operators with traffic solicitation rights

- **have the obligation to publish rates at the request of a shipper and to specify the level of service to be provided as part of published tariffs,**
- **have the right to enter into confidential contracts with shippers, and**
- **have authority to limit liability for loss or damage of a shipper's goods only in accordance with section 137 of the *Canada Transportation Act*.**

A shipper on a line served by more than one carrier has the benefit of direct competition. Such competition limits the ability of a railway — whether the infrastructure owner or the guest operator — to exercise market power. This makes several existing protections or forms of recourse redundant. Competitive connection rates and interswitching (discussed earlier in this chapter) would not be necessary on lines where more than one carrier operates. To eliminate potential confusion, it must be made clear that where running rights with traffic solicitation are in effect on a line, neither the infrastructure owner nor the guest operator would be subject to the interswitching and competitive connection rate provisions. Finally, a shipper would have an effective alternative for shipping goods; consequently final offer arbitration would not be necessary.

An order granting a guest operator running rights with traffic solicitation should therefore have the effect of suspending the interswitching, competitive connection rate and final offer arbitration provisions for traffic on the lines in question, as long as the order is in force or until the guest operator discontinues service on the line.

Recommendation 5.15
The Panel recommends that interswitching, competitive connection rates and final offer arbitration be suspended with respect to the movement of traffic on lines served by an infrastructure owner and one or more guest operators with traffic solicitation rights.

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The Act requires an infrastructure owner to follow a set process for discontinuing service on a line. The existence of running rights should not affect that process.

One objective of the line transfer and discontinuance process is to give shippers adequate notice that service on a line may be discontinued. The Panel believes that shippers served by a guest operator should also have adequate notice of the operator's intention to discontinue service.

> **Recommendation 5.16**
> **The Panel recommends that running rights orders issued by the Canadian Transportation Agency include a requirement that the guest operator provide reasonable notice when it intends to withdraw service on a line.**

Rail Access Pricing

When running rights are granted — with or without traffic solicitation rights — the host continues to assume the risks and obligations associated with owning the infrastructure. In exchange for a chance to earn a return on these assets, the host's shareholders assumed the risks of investing in the infrastructure. Consequently, when another operator is allowed to use the host's assets and, more important, to solicit its clients, the host must receive appropriate compensation.

The Panel is determined to avoid access proposals that could create undue system inefficiencies or an unfair advantage for either the infrastructure owner or the guest operator. Under the current provision, once running rights are granted, the guest and host are expected to negotiate compensation. The Panel believes that encouraging commercial negotiations is the right approach but is cognizant that agreement may be difficult to achieve. The Agency should therefore continue to have authority to set compensation if no agreement is reached.

> **Recommendation 5.17**
> **The Panel recommends that running rights compensation be negotiated between the parties. If the parties are unable to reach a commercial agreement in 90 days, either party could ask the Canadian Transportation Agency to set compensation in accordance with the Panel's rail access pricing proposals.**

The Agency's ability to establish access charges that are fair to both the guest and the host has an important bearing on the overall success of the competitive access regime. The potential need for the Agency to establish compensation is recognized in section 138 of the Act, but the Act is silent on how compensation is to be established. This is a significant gap, and one that becomes all the more important in the context of the Panel's proposals to extend access to the provision to a broader group of market participants and to include traffic solicitation rights.

Participants in the Panel's consultations had varying perspectives on what constitutes appropriate compensation for track access. Some shippers appealed for low access charges that encourage competitive entry into rail markets. CN and CPR, on the other hand, were concerned that low access charges would invite 'cherry-picking' of the most lucrative traffic and jeopardize their ability to generate revenue to support future investment.

The Panel considered various pricing approaches and reviewed the charging systems other countries use in situations of imposed access. There tends to be widespread agreement that an access charge should consist of two components:

1. a payment to compensate the infrastructure owner for the additional costs it incurs as a result of the guest's activities on the line; and
2. a payment to help cover the common costs of infrastructure ownership and management.

The Panel's interim report identified some of the additional costs a track owner may incur in this situation. The first payment component addresses the costs that may arise from

- the need for additional facilities to accommodate the guest;
- increased physical wear on the infrastructure;
- the need for greater expenditures on traffic control;
- traffic congestion; and
- the increased risk of traffic delays, leading to performance penalties.

Where two or more railways are operating on a line, additional precautions are needed to ensure a high standard of safety. The host railway deserves compensation for the new investment it must make and the additional operating expenses it incurs to maintain a high standard of safety on shared track. Incremental costs will be influenced by the nature of the guest's track requirements. They in turn depend on the type and volume of traffic and the frequency of the guest's trips over the line. Incremental costs will also be influenced by the nature and condition of the line and by the host's own track use requirements.

The second access charge component recognizes that the host requires a return on its investment in the rail network. Without reasonable compensation, track owners have little incentive to maintain the network. Various methods can be used to calculate the guest's contribution to the common costs of track ownership. For example, the charge could be based on

1. a contribution rate of 7.5% of variable costs, now used in calculating interswitching rates;
2. a contribution rate of 20% of variable costs, legislated under the *Western Grain Transportation Act*;
3. the so-called efficient component pricing rule (ECPR), under which the host is compensated for the opportunity costs of the business lost to the entrant, including any forgone profits. Economists have proposed ECPR for situations where a new entrant must gain entry to a 'bottleneck facility' if it is to compete with the incumbent carrier.[12] It originated in a regulatory context where the focus was on creating a level playing field on which the guest and the host could compete, i.e., only carriers at least as efficient as the host could enter the market;
4. the return a private corporation would require to make a green-field investment equivalent in amount to the replacement value of the line and involving comparable business risk;[13] or
5. the application of an appropriate cost of capital to the estimated market value of the capital stock used by the guest. The U.S. Surface Transportation Board has used this approach mainly to address track rights issues arising after rail mergers.[14] The STB approximates the value of the line over which access is being sought by applying the amount paid per dollar of earnings to acquire the overall railroad property (i.e., excluding equipment and non-rail assets) to the earnings on the particular line. This estimated capital value is then apportioned between the host and the guest on the basis of their expected traffic shares.

System-wide rules, such as those specifying contribution rates as a percentage of variable cost, have appeal because of their ease of application, but calculated payments may bear little or no connection to the revenue required to give rail owners adequate investment incentives. The fourth and fifth proposals attempt to address this issue by explicitly relating the guest's payment to an estimate of the host's required return on investment. Some difficult and controversial judgements have to be made in applying these methodologies (especially the fourth approach). Moreover, a compensation formula based on average returns would skew the incentives facing prospective entrants, making lower-margin traffic on the line less attractive and higher-margin traffic more attractive.

In reviewing alternative pricing schemes, there is a need to recognize that the present commercial system is based on differential pricing. Along with paying a rate at least sufficient to cover its identifiable costs, all traffic must make some contribution to the unallocable or shared or 'constant' costs associated with the company's overall operations and network. The latter mark-up varies among shipments. As a result of commercial negotiations between carriers and shippers, traffic that is relatively insensitive to price tends to pay higher mark-ups than price-sensitive traffic.

The Panel accepts that, in some circumstances, competitive access would leave host railways vulnerable to cherry-picking by newcomers that do not bear the full costs of the existing infrastructure, unless the access charge is sufficiently high. In this environment, competitive access must retain elements of differential pricing while permitting additional competition. Although it could be complex, the Panel sees no alternative to requiring a commodity- or traffic-based access charge, where the access fee bears some relation to the existing revenue contribution of the traffic that is subject to competitive entry. This would approach the ECPR rule but need not conform exactly. The ECPR principle calls for access traffic to pay a charge equal to the revenue contribution being realized by the incumbent. The rationale is that this access fee makes entry attractive only if the new carrier is more efficient than the incumbent.[15] In the approach the Panel recommends, the access fee could be somewhat less than what is indicated by the ECPR rule. A reduction from the ECPR rule could be because the incumbent carrier may not be as efficient as possible. The Agency could also make use of the 'stand-alone cost test' to deal with the issue of excessive mark-ups.

The Panel explicitly rejects access fees based on average revenues or average contributions to constant costs. This is precisely what allows cherry picking, and this approach would undermine the differential pricing necessary for a commercial rail system where much of the traffic is price-sensitive.

Beyond examining the mechanics of proposed pricing approaches, it is important to take account of why railways want the right to operate on other carriers' tracks. In particular, there is a need to distinguish between situations where

1. a railway seeks access so that it can go after traffic now served by the track owner; and
2. a railway simply wants the right to run its trains over the track of another carrier.

Different considerations apply in each situation, and these differences should figure in the determination of the rail access charge.

Rail Access with Traffic Solicitation

Where new entrants seek traffic solicitation rights, host railways have reason to be concerned that guest operators will skim their most profitable business. Promoting competition is desirable, but it must be tempered by considering the special burdens on the infrastructure provider. Access charges must be set high enough that new entrants cannot exploit a network in which they have no proprietary interest and track owners are encouraged to make the investments needed to sustain the infrastructure.

Recommendation 5.18

The Panel recommends that, where traffic solicitation is sought, the rail access charge consist of

1. **compensation for all incremental costs the guest railway imposes on the host; and**
2. **a contribution to the common costs of rail ownership that approaches the implicit contribution the infrastructure owner is earning on the specific traffic being solicited.**

The first component of the access charge covers the additional costs the host incurs, including the increased operating risks it faces and higher outlays for repair and maintenance, traffic control and other factors. The second component is aimed at ensuring the guest bears a fair share of the costs of infrastructure ownership and operation and that the guest and host compete on approximately equal footings.

The contribution of the host's traffic to common costs can be estimated by examining the difference between revenue and variable costs for specific commodities on specific lines. Under the Panel's proposal, the Agency would have discretion to set the second component of the access charge slightly below this estimated level where it believes the host carrier could offset the revenue reduction by improving operating efficiency.

To calculate the second component of the access charge, the Agency will need to know which traffic the entrant intends to solicit. It will then need information on the incumbent carrier's line-specific revenue and variable costs for each of the identified commodities. These data will allow the Agency to estimate the contribution to common costs per car-kilometre currently made by each of the commodities being solicited. There can be benefits from setting the commodity-based portion of the access fee slightly below this benchmark where there is scope for the infrastructure owner to improve efficiency. But while a slightly lower fee may generate some beneficial pressure for cost reduction, a charge significantly below the benchmark is likely to disadvantage track owners and jeopardize the investment needed to maintain and upgrade the network.

In summary, under the Panel's proposal, carriers seeking access with traffic solicitation would be required to identify the traffic they are pursuing. The Agency would then establish a two-part access fee consisting of a general charge and a commodity-based charge. As is generally the case in track access agreements, both charges would be specified as a function of traffic volume and transport distance. The second fee component would be related to, and not fall very much below, the estimated contribution of the host's own traffic to the common costs of infrastructure ownership and operation.

In the Panel's view, the two fee components should apply not only to current traffic, but also to new traffic. Although it does not forgo revenue when the guest's growth occurs through new business development, the host has an interest in such operations by virtue of its role as owner and manager of the line. In the case of new traffic, compensation arrangements must continue to give the host an incentive to maintain and, where necessary, expand and upgrade the line.[16]

Rail Access without Traffic Solicitation

Many trackage rights agreements are in place to facilitate rail freight operations and improve railroad efficiency. Often these are negotiated on a quid pro quo basis and adhere to accepted cost-sharing practices. CN and CPR, for example, have extensive track-sharing agreements covering Ontario, the U.S. midwest and the north-eastern United States.[17] Track access agreements without solicitation rights also exist between infrastructure owners and passenger and commuter railways.

Where commercial negotiations for running rights fail, federal railways can apply to the Agency (under section 138) to resolve the dispute, including a determination of the appropriate level of compensation. As noted, however, the Act offers no guidance on the level of charges. Passenger and commuter rail providers can also use the Act's FOA provisions where they are dissatisfied with a railway's proposed track access rates.

Although carriers often exchange trackage rights, the sale of track capacity can reasonably be considered a distinct commercial activity. In this case, the host is simply providing rail track services instead of an integrated package of rail and carriage services. If track access were marketed on the same basis as other rail services, rental rates for track would likely be set at levels that reflected both differences in costs to the host and differences in the value of the service to guests. Users that placed a high value on trackage rights would pay a higher access charge than carriers that gained marginally from the increased convenience of having a rail 'bridge' available.

The Panel believes it is important to establish pricing principles that are consistent with the treatment of track operations as a commercial enterprise. Government policies should not discourage the railways from implementing more efficient structures, and they should allow for the possibility that corporate restructuring could result at some point in infrastructure operations becoming a self-supporting and organizationally distinct corporate activity. Differential pricing has a role as part of an efficient pricing regime for track access, but certain constraints are needed. Infrastructure providers should not be allowed to exercise their market power to generate revenues that provide more than a fair rate of return on their overall capital investment; prices in excess of the costs of providing rail services are justified only in so far as they help railways cover their overhead. In addition, the Panel believes a pricing limit must be set to prevent track owners from exploiting their potentially significant market power in relation to government-owned and -supported passenger and commuter services.

Passenger and commuter railways have very specific track access requirements that are often relatively costly to accommodate. Unlike guest operators carrying freight, passenger rail operators cannot readjust their schedules or reroute their cars to minimize congestion or give priority to any special needs the infrastructure owner might have. Track access agreements should include guarantees that passenger and commuter railways will receive the high quality of services they require. At the same time, contracts should ensure that the host is fully compensated for all incremental costs incurred — including potentially high congestion and delay costs, or the cost of the investment needed to reduce or avoid them — and receives a reasonable rate of return on the book value of the assets used by the passenger or commuter railway.[18]

> **Recommendation 5.19**
> **The Panel recommends that the following considerations be used as a guide in determining compensation for track access without traffic solicitation rights:**
> - **access fees should cover all incremental costs the host incurs as a result of the guest railway's operations;**
> - **access fees that differentiate among users on the basis of the value they place on rail access should be permitted;**
> - **access fees based on differential pricing should not be allowed to help infrastructure owners generate more revenue than they need in total to cover costs, including a reasonable return on their investment; and**
> - **access fees for government-owned or -directed passenger and commuter rail services should be limited to an amount that compensates infrastructure owners for the additional costs they incur, including congestion and delay costs, and provides a reasonable after-tax return on the book value of the capital assets used by the guest.**

Safety and Liability

Class I railways' significant investments have resulted in their being among the safest in the world. Granting running rights as a means of enhancing competition cannot be allowed to jeopardize that impressive safety record.

Co-ordinating two (or more) railway operations on a single line raises safety concerns that do not exist on a line with a single operator. The rail industry seems to have managed these issues successfully where running rights are consensual, but if running rights were imposed by regulation, the challenges to safe rail operation could be different. Where two railway companies operate over the same track, a considerable amount of co-ordination must take place to ensure safe operations — including communication in day-to-day operations between operations planners, rail traffic controllers, track maintenance and mechanical forces, field transportation staff, and operating crews. As well, planning and management of conflicting priorities must take place daily.

An important element of safe operation is the training and certification of personnel. In its submission to the Panel, the Brotherhood of Locomotive Engineers noted the need for a proper qualification and certification program that provides quality control and consistency in important safety skills of locomotive engineers and rail traffic controllers.

The trend in railway safety is away from prescriptive regulatory requirements toward a regime where railway management is responsible for ensuring that appropriate safety systems are in place. Recently Transport Canada has required that railways implement and maintain a safety management system, and all federal railway companies must submit specified information about their systems to Transport Canada. The need for greater federal/provincial regulatory harmonization in the area of railway safety is also recognized.

Consequently, receiving authority from the Agency to operate over the infrastructure of another railway is not the end of the matter. An applicant's running rights proposal must adequately address safety concerns. Although the Panel's mandate does not include railway safety issues, our proposal on running rights has safety implications that will need to be addressed. Transport Canada should review the situation to ensure that the provisions of the *Railway Safety Act* are adequate to address the situation.

A note on the cost of safety: as set out in the Panel's rail access pricing proposals, to the extent that an additional cost is associated with the safety burden on the infrastructure owner flowing from running rights, those costs must be borne by the guest railway. This matter is covered in the Panel's recommendations on compensation for rail access.

Constitutional Implications

Under the Panel's proposals, any railway operator, whether under federal or provincial jurisdiction, could apply for a running rights order. The Panel's interim report identified a possible unintended consequence of such a change. Under the constitutional division of powers, works or undertakings of a provincial character whose operations are sufficiently integrated with those of a federal work or undertaking may lose their provincial character. The Panel's concern was that a provincial short line railway operating to a significant degree on the lines of a federal railway might find that its operations were integrated with those of the federal line to the extent that, from a constitutional point of view, the railway would lose its provincial status and be deemed a federal railway.

A legal opinion prepared for the Panel clarified this issue.[19] First, Parliament can grant running rights to a provincially regulated railway and require such a railway to meet any applicable federal insurance, licensing, safety or other statutory requirement. This is important if Parliament is to have a say in how provincial railways operate while using federally regulated track.

Second, the provincial railway would be subject to full federal jurisdiction only if its operations were integrated with those of the federal railway. Mere physical connection between a provincial and a federal undertaking would not be sufficient to establish exclusive federal jurisdiction over the provincial undertaking. Where running rights were sought by a provincial railway in order to compete with the federal railway, it is likely that the operations of the provincial railway would remain separate and distinct from those of the federal railway, avoiding any suggestion of integration from a constitutional point of view. While all traffic running over the federal line would be subject to federal regulation, the other activities and operations of the provincial railway would remain subject to provincial jurisdiction.[20]

Internal and International Trade

It has been suggested that provisions to permit enhanced access without full cost recovery could be regarded as a disguised subsidy to shippers and as an expropriation, thus making the measure vulnerable to challenge under international trade treaties to which Canada is a party. Throughout this report, the Panel has taken care to ensure that the recommended compensation formula is fair and compensates an infrastructure owner adequately for use of its track. Thus it should not be vulnerable to a successful trade challenge on this ground. CN also raised the issue of national treatment with respect to internal trade commitments.

> **Recommendation 5.20**
> **The Panel recommends that the Minister of Transport ensure that implementation of the access proposals recommended in this report comply with all applicable requirements of international and internal trade law.**

Other Competitive Access Proposals

Regional Railways

The regional railway concept has engendered much debate in the Prairie provinces. Numerous interveners told the Panel there is a need to foster greater competition among the Class I railways, to retain potentially viable branch lines, to protect deteriorating Prairie roads, and to save rural communities from extinction. Many interveners, including Prairie provincial governments, see the regional railway concept as addressing these problems. Two visions of the regional railway concept have been elaborated:

- The Brotherhood of Maintenance of Way Employees (BMWE) approach.
- The OmniTRAX (CanRail West) vision.

Brotherhood of Maintenance of Way Employees Approach

The BMWE sees the need for a regional railway as part of an overall approach to improving grain handling and transportation. It proposes an integrated regional grain system, operated as a not-for-profit service and intended to lower overall costs by making better use of existing elevator, rail and road infrastructure. The union maintains that under its approach, it can secure a supply of grain for the branch lines.

The union intends to work collaboratively with the Class I railways. On January 25, 2001, the BMWE and CN signed a Memorandum of Understanding whereby CN would initiate a commercial long-term lease of specific rail lines with a Co-op regional railway operated by BMWE. (The BMWE intends to seek a similar agreement with CPR.) CN would retain ownership of the lines (about 1,636 kilometres of track), but the Co-op would have exclusive control of the lines and be responsible for operation and maintenance. At the end of May 2001, the parties were finalizing the details of the commercial agreement.

The OmniTRAX Proposal

OmniTRAX has proposed that its subsidiary, CanRail West Inc. (launched on September 15, 2000), become a regional railway using 'managed access' over designated lines. OmniTRAX is seeking regulatory changes to give CanRail West guaranteed access to designated CN and CPR rail lines (some 6,200 kilometres of branch lines and secondary lines owned and operated by CN or CPR). Access would include traffic solicitation rights, unrestricted rights to deliver traffic to designated competitive interchange locations (or to final destination if necessary), and rights to serve captive shippers on the mainline, if requested by the shipper. Under the proposal, there would be no reciprocal access.[21]

OmniTRAX defines managed access as

> the right for a selected railway operator to serve customers on designated lines owned by CN or CPR with the same rights and obligations as the owning carrier while providing a return to the owner.

OmniTRAX proposes that the access fee be determined through commercial negotiations. Failing this, the company anticipates that the Canadian Transportation Agency would be empowered to set rates, terms and other conditions of access.[22]

Under the proposed managed access scheme, the number of operators would be limited to ensure the viability of services provided. Operators would have to be established railways under the Act and regulated by the Agency. OmniTRAX believes that its regional railway concept can be successful only if the guest operator has adequate access to the national grain hopper car fleet and to support services (terminals, yards, maintenance areas, etc.), has the ability to set commercial rates, and has access to quick and effective dispute resolution mechanisms. A smoother process for acquiring branch lines abandoned by the Class I operators would also be needed.[23]

The Panel's Assessment

The potential impact of the OmniTRAX proposal on the degree of competition is not at all clear. If the selected carrier purchased track from CN or CPR, it would become the sole operator on those lines, since there would be no reciprocal access. On the other hand, where the selected carrier operated through running rights over CN or CPR lines, more direct competition might result.

The impact on system efficiency is also unclear. To the extent that the selected carrier's operations perpetuated the retention of non-viable Prairie branch lines, commercialization of the grain handling and transportation system could be slowed, effectively raising costs. The existence of a regional railway might, however, stimulate the mainline carriers to become more efficient.

Would the proposal add to the Agency's regulatory load? The OmniTRAX proposal is unlikely to add anything to the existing load imposed by operators asking the Agency to grant running rights. Likewise, the impact on host carrier profitability is not likely to be any greater or less than that imposed by operators requesting running rights; it will depend on the compensation formula used to calculate the access fee. However, because OmniTRAX has asked that CN and CPR not be permitted to continue abandoning branch lines, the access fee would have to include the additional costs associated with line retention.

One objective of the OmniTRAX proposal is more extensive use of Prairie branch lines and secondary lines. Nevertheless, it is possible that farmers may still continue to truck their grain past grain elevators on local branch lines to take advantage of incentives offered by high throughput elevators. Hence, the branch line network may not be used much more than at present.

The regional railway concept has been accepted with enthusiasm in parts of western Canada, with the participation of Class I railways in some cases. It is encouraging to note that the concept is developing in the existing regulatory environment. The Panel believes that commercially sound regional railways could provide tangible benefits to regions where they operate. Further, the Panel's proposals to transform running rights into a competitive access tool may provide further incentives to create commercially sound regional railways.

The Panel notes that the OmniTRAX proposal relies on legislative changes giving a designated regional railway operator special legislated privileges. The Panel cannot endorse a system where one operator is treated differently from others by statute or regulation. It is clear that a regional railway system could emerge on the Prairies, or elsewhere in the country, without regulatory change or government interference. The Panel therefore recommends no legislative changes specifically in respect of regional railways.

Vertical Separation

Vertical separation in transport means that

> the operators of transport services work at arm's length from the provider of the fixed facilities. In railways separation can begin with merely keeping the accounts for infrastructure and operations separate, but it can extend to having different entities to own, provide, and control the infrastructure, and an entirely independent set of operators.[24]

As this definition shows, vertical separation encompasses a range of possibilities but usually involves a separate entity owning the infrastructure and selling track access to providers of rail transportation services.

Views on Vertical Separation

Significantly, the Panel heard virtually no calls for vertical separation from interveners. Among all the representations made to the Panel, only one, the PROLOG Canada Inc. submission, suggested a form of vertical separation. Many submissions contained proposals for increasing competition between railways; they often referred to experience with 'open access' overseas (including jurisdictions where vertical separation has been implemented), but none went so far as to propose vertical separation in Canada.

The submission from OmniTRAX, for example, pointed out that reforms

> adopted in countries like Australia and Europe cannot be replicated in this country. Primarily private companies own railway infrastructure in this country, and the process of creating separate track authorities would be a form of expropriation.[25]

Similarly, Agricore's submission stated that

> While in theory, a public rail bed would provide the environment for full competition, it is unlikely that the resources or the political will to take the necessary action, including expropriation of property, to create a public rail bed exists.[26]

The Panel's Assessment

The Panel continues to believe that vertical separation involving either government purchase of the infrastructure or a compulsory change in the ownership of private railway assets would be a major reversal of Canadian transportation policy and problematic in an integrated North American rail industry. In addition, vertical separation would mean trading off the efficiencies of the present business model where rail operators own the infrastructure. For these reasons vertical separation is not worth considering unless the evidence of its benefits is incontrovertible.

Vertical separation could promote equal access, mitigate carriers' market power, and reform (but not eliminate) differential pricing. However, vertical separation would not necessarily reduce overall costs, generate more money for infrastructure investment or reduce regulation, since infrastructure itself would be a monopoly. It is not clear what the impact would be on rates and costs. There would be issues in determining ownership of the infrastructure, setting and regulating terms of access, and determining the sharing of the costs.[27]

Integration of Canadian and U.S. markets adds further complications. If Canada opted for vertical separation but the U.S. did not, Canadian operators that did not own track in the U.S. would be restricted to Canada, whereas U.S. operators could operate freely in both countries. Canadian operators would face difficult competition for transborder traffic or traffic subject to diversion from one country to the other. For purely domestic traffic, there might be several carriers competing, Canadian and U.S. The question of how to structure access charges would also arise. Different formulas encourage different types of operations. Depending on the formula, the flow of traffic at the border could be seriously impeded.

What is clear is that vertical separation is no panacea.

The Panel's position does not preclude the railways, on their own, from implementing some form of vertical separation if they find it appropriate. At the same time, the Panel recognizes that this is unlikely under the present rail industry structure. The railways' business strategy has been — and continues to be — to operate as vertically integrated enterprises. CPR's submission is explicit on this, arguing strongly that vertical integration is the most efficient way for railways to operate in North America.[28]

While not likely at present, various scenarios for railway-initiated vertical separation can be envisaged, for example:

- CN and/or CPR decide to turn their respective infrastructure into business units separate from train operations or to spin off one or the other.
- CN and CPR decide to merge their networks, or portions of them, and operate this combined infrastructure as a jointly owned enterprise.

Railway Line Transfer and Discontinuance

The Act's line transfer and discontinuance provisions, as introduced in 1996, had as their premise the notion that decisions about continuing to operate a line or selling it are business decisions best left to the owner or operator, a proposition the Panel supports. These provisions significantly reduced the regulatory burden on federal railways and allowed them to rationalize their networks much more easily than before. The provisions require only that the operator give notice of impeding discontinuance, an opportunity to negotiate a commercial sale of the line, and where no commercial sale is feasible, to offer the line at its net salvage value to different levels of government. Several changes were introduced in 2000, including changes designed to make it easier for community-based interests to acquire grain-dependent branch lines. The Panel believes that a commercial approach to line sales is the one that will, in the long run, serve the best interests of communities, shippers and railways.

Nevertheless some interveners, principally in western Canada, suggested that the Agency's oversight powers be enhanced to deal with ability of railway companies to segment track (decide which portions will be offered for sale) and to establish paper barriers (set contractual terms governing a sale transaction). The Panel's view is that such steps would interfere with the business decisions of the track owner.

Others have suggested that the Agency be directed to take specific factors into account in determining net salvage value. Such an approach is possible under the existing legislation by way of policy direction, but the Panel believes that the Agency is generally in the best position to consider arguments about the factors that should or should not be taken into account in determining net salvage value case by case. (See also Chapter 13.)

Others asked for the ability to force a railway company to discontinue a line if adequate service levels are not maintained, thus making it available for others to purchase. This change was introduced in 2000 with respect to grain-dependent branch lines.

Some requested greater Agency control over discontinuance of rail sidings. Rail sidings are not subject to the Act's transfer and discontinuance provisions. In the past complaints about removal of rail sidings have been dealt with under the Act's level of service provisions. These complaints stem in part from shippers' lack of knowledge about which sidings are currently in operation, a situation that arises because railways are not obliged to inform interested parties which sidings are in service. The Panel believes this inadequacy should be rectified.

> **Recommendation 5.21**
> **The Panel recommends that railways be required to identify and publish a list of rail sidings in operation on their network and available for producer car loading. The Panel recommends further that railways be required to give 60 days' public notice before removing a siding from operation.**

Other concerns were raised with the Panel about the $10,000 a mile payment that a railway discontinuing a grain-dependent branch line must make to affected municipalities, a provision added to the Act in 2000. The concerns relate to perceived shortcomings in the government's policy direction in this matter. More experience with the new provision would be needed, with evidence that it has had unintended consequences, before the Panel could comfortably recommend amending this provision. The Panel understands that Transport Canada is monitoring all aspects of the recent amendments with respect to grain. Any significant problems would be noted in that monitoring process.

Requests for harmonization of provincial legislation with federal line transfer and discontinuance provisions must be addressed to provincial authorities. The Panel notes, however, that considerations applicable at the federal level may not apply at the provincial level and that harmonization could in fact discourage the creation of short lines.

Notes

[1] Andrew Shea, "Assessment of Open Access Policies in Other Industries and Jurisdictions: A Literature Review", paper prepared for the Canada Transportation Act Review (CTAR), Ottawa, The Conference Board of Canada, April 2001.

[2] For a summary of the CAR proposal, see The Canadian Shippers' Summit, "Enhancing Rail Competition in Canada", submission to CTAR, October 2000.

[3] Currently, the Agency must first attempt to calculate the CLR using revenue for similar traffic moving over similar distances. If there is no such traffic, the Agency calculates the CLR based on the system average revenue per tonne-kilometre. If it is unable to calculate the CLR using that method, the Agency may establish an alternative method of determining the CLR. The CAR proposal eliminates the first and third methods of determining the rate.

[4] 75th percentile: 75% of the movements of the commodity in question generate lower revenue per tonne-kilometre for the railway and 25% generate higher unit revenues. Similarly, the 90th percentile means that 90% of the movements of the commodity in question generate lower revenue per tonne-kilometre for the railway and 10% generate higher unit revenues.

[5] In general, the two most costly components of any rail movement, on a per tonne-kilometre basis, are picking up traffic from a shipper's siding and delivering it to the consignee's siding or an interchange with a connecting carrier. By contrast, the line haul costs, on a per tonne-kilometre basis, are much lower. Because origin and destination switching costs are spread over more kilometres for longer movements, cost (and revenue) per tonne-kilometre decline as the length of movement increases. The above provides an illustration of rate taper.

[6] Section 27(2) applies to any relief under the Act. For example, the test applies to a complaint about air cargo rates.

[7] This provision does not apply to the simpler process for matters under $750,000.

[8] *Railway Act* 1888, section 102.

[9] 6 Canadian Railway Cases, p. 138

[10] Canadian Shippers' Summit, submission to CTAR, October 2000.

[11] Western Canadian Shippers' Coalition, supplementary submission to CTAR.

[12] William J. Baumol, "Public Interest Standards for Canadian Rail Rate Regulation: Differential Prices, Access and Price Ceilings", statement to CTAR, October 6, 2000.

[13] Kieran Management Advisory Services Ltd., "Methods and Practices in Pricing Railway Track Access", paper prepared for CTAR, January 2001.

[14] See, for example, U.S. Surface Transportation Board Finance Docket 33388 (Sub-No. 69), Decision No. 123, Decided May 18, 1999.

[15] ECPR pricing is not necessary to ensure efficiency, however. Under almost any pricing scheme, the most efficient firm will prevail as long as there is price competition in the market.

[16] In most circumstances, the commodity-based charge for new traffic can be based on line-specific data provided by the incumbent carrier, but a different reference point is needed where the host is pursuing commodities not being carried currently on the line. In these circumstances, the Agency could base its access price calculations on the incumbent's system-wide revenue and variable costs for the particular commodity.

[17] Discussed in the submission by the Railway Association of Canada, October 31, 2000.

[18] After the book value of the line is established, its value would be apportioned among the host and the passenger and commuter guests, using available indicators of relative track usage.

[19] The opinion was prepared by constitutional expert Professor Patrick Monahan of Osgoode Hall Law School.

[20] The conclusions reached in this opinion are similar to those reached by the transportation law group Aikins, MacAulay & Thorvaldson, which prepared a supplemental presentation on this point at the request of the Panel.

[21] OmniTRAX Inc., "A Proposal to Enhance Competition in the Canadian Railway Marketplace" submission to CTAR, October 3, 2000, p. 14.

[22] OmniTRAX, submission, pp. 19–20.

[23] OmniTRAX Inc., "A Regional Railway: An Exciting Prospect for Canada's Shippers and Small Communities", September 15, 2000, p. 4.

[24] Louis S. Thompson, "The Benefits of Separating Rail Infrastructure from Operations", Public Policy for the Private Sector, note no. 135, December 1997, The World Bank Group.

[25] OmniTRAX, submission, p.13.

[26] Agricore Co-operative Limited, "Competition in Grain Transportation, A Submission to the *Canada Transportation Act* Review Panel", October 2000, p. 3.

[27] Louis S. Thompson, CTAR Symposium on Rail Access, Winnipeg, February 2001.

[28] Canadian Pacific Railway, "Railway Infrastructure, Access and Competition", submission to CTAR, November 2000, pp. 36–38.

Chapter 6
The Merger Review Process

Analysis of national transportation policy must acknowledge the link between the effectiveness of all elements of Canada's transportation system and its ability to remain competitive as a trading nation. Developments beyond our borders, for example, have already had specific effects on Canada's rail sector. Mergers and acquisitions have produced an industry featuring a few major carriers with extensive networks and many smaller carriers operating regional and short line systems.[1] The relevance of such events is twofold. First, the trend to greater concentration could make consideration of measures to foster competition all the more urgent. Second, it raises the question of whether the existing legislative framework can deal adequately with changing industry structure. The December 1999 announcement of the proposed merger between Canadian National and Burlington Northern Santa Fe fuelled the debate.

Which body, if any, should oversee transportation industry restructuring? Should it have the authority to prevent mergers or influence the conditions of a merger? If so, what criteria and tests should apply? This was the context for the Panel's consideration of how mergers in the transportation sector should be regulated.

Background

Before 1996, the *National Transportation Act, 1987* directed that proposed mergers be examined by the National Transportation Agency in certain circumstances. The Agency had the power to disallow a proposed transaction if it was found to be against the public interest. The Agency's public interest determination could and did include competition issues. Mergers were also reviewed by the Competition Bureau, under the *Competition Act*. The overlapping authorities of the Agency and the Competition Bureau could, and occasionally did, result in conflicting decisions. The National Transportation Act Review Commission questioned the need for industry-specific oversight of transportation sector mergers.

The government saw merit in the Commission's recommendations and terminated industry-specific oversight in the transportation sector. As a result, transportation-sector mergers or acquisitions are now subject only to the *Competition Act* review process. The mandate of the Commissioner of Competition, who heads the Competition Bureau, is limited to competition issues, however, and does not include any other public policy issues.

The merger provisions of the *Competition Act* are designed to establish whether a proposed merger will likely result in a substantial lessening or prevention of competition in any relevant market. Notice of a proposed merger must be given to the Competition Bureau when certain financial thresholds are exceeded.[2] The rationale for pre-merger notification is to give the Competition Bureau sufficient information and time to determine whether a transaction is likely to raise a serious competition issue.

Assessing the impact of a proposed merger under the *Competition Act* involves subjecting the proposal to a test — will there be a substantial lessening of competition if the merger proceeds? The Bureau attempts to determine whether a merger will have a negative impact on the level of competition in a particular market. Will the market power of a merged entity enable it to increase its price above competitive levels for a sustained period in a relevant market, for instance, or will the transaction hinder or impede competition that would naturally have occurred in the absence of the merger?

As part of the review, the Competition Bureau makes extensive market contacts to seek the views and concerns of customers, suppliers, competitors and any other party that might be affected. It also receives submissions and recommendations from anyone potentially affected by the proposed transaction. In very complex transactions, the Bureau may retain industry experts, economists and accountants to assist in assessing the competitive impact of a proposed transaction.

The Competition Commissioner's policy is then to discuss any concerns with parties to a proposed merger, exploring how to alleviate any negative impact on competition, generally through structural changes.

If these discussions do not address the Competition Commissioner's concerns adequately, the proposed merger can be challenged before the Competition Tribunal, a judicial body independent from the Competition Bureau. The Tribunal, on application of the Competition Commissioner, can hold a hearing at which both the Competition Bureau and the parties call evidence. There is an opportunity for other interested parties to intervene before the Tribunal. Decisions of the Tribunal can be appealed to the Federal Court of Appeal.

The *Competition Act* merger review process has several positive attributes. It assesses the impact of a proposal against a standard — whether the merger would substantially reduce competition in a specific market. This provides a degree of certainty and predictability to all parties. If the proposed merger does not meet the standard, structural remedies are the preferred means of addressing the shortcomings. Such remedies encourage competition with little need for continued monitoring or further regulatory intervention.

The *Competition Act* process does have two apparent shortcomings, however. First, the scope of the review process is limited to competition issues — it does not consider broad national or public interest issues. Second, at least during the Bureau's assessment of a proposed merger, the process is by necessity not very open or public. Although the Competition Bureau discusses proposed mergers with parties that would be affected, its analysis is conducted in private, and all documentation is confidential, because of the sensitive commercial nature of much of the material.

In the Panel's view, it is these concerns that resulted in the development of sector-specific review processes. Table 6.1 lists some industry-specific merger reviews that are carried out in addition to the *Competition Act* review process and the substantive tests applied in those reviews.

[illegible]

Current Merger Review Processes
in addition to the *Competition Act*

Industry	***Government Agency****	***Substantive Test***
General	None	n/a
Rail	None	n/a
Telecommunications	Canadian Radio-television and Telecommunications Commission	Canadian control
Broadcasting	CRTC	Canadian control and public interest
Banking	Office of the Superintendent of Financial Institutions House of Commons Standing Committee on Finance Standing Senate Committee on Banking, Trade and Commerce Minister of Finance	Prudential issues Public interest Public interest Public interest
Airlines	Canadian Transportation Agency Minister of Transport	Canadian control Public interest

*In addition to the Competition Bureau.

In the airline sector, if a proposed merger exceeds the financial threshold for notifying the Competition Commissioner under the *Competition Act*, and if the Minister of Transport believes that it raises public interest concerns related to transportation, it must go before the Governor in Council for approval. The Competition Commissioner reports any concerns that the merger would prevent or lessen competition to the Minister of Transport, and recourse to the Competition Tribunal is precluded. The Minister in turn advises the parties of any national transportation concerns, along with which of the Competition Commissioner's concerns should be addressed with the Commissioner. This allows the parties to propose measures to address the concerns. The proposed transaction is approved by the Governor in Council if it is satisfied that the transaction is in the public interest. Approval is subject to any conditions the Governor in Council might make.

The airline merger process significantly changes the Competition Commissioner's role. The Commissioner interacts with the Minister of Transport, and it is the Minister who determines which, if any, of the Commissioner's competition concerns must be addressed by the parties. A decision of the Governor in Council considers both competition and public interest issues.

The Panel's Assessment

Mergers in the transportation sector often involve matters of great public interest. The structure of the rail network, for instance, has implications for development, strongly affecting the economic viability of industry now in place and the location decisions of industry in the future. Similarly, in federally regulated industries with major national network infrastructure (banking and telecommunications, along with railways), citizens coast-to-coast, in large communities and small, see themselves as potentially affected by mergers that may transform important elements of their communities. As a result, broad cross-sections of the citizenry and many organized interest groups are bound to seek avenues to articulate their concerns and seek reassurances that they will be addressed.

Neither the Competition Bureau's merger review process nor the Competition Tribunal process can readily accommodate this generalized form of public engagement. Moreover, the legislative framework for both the Competition Bureau and the Competition Tribunal focuses on the competitive implications of a merger, recognizing efficiencies as a legitimate offsetting factor. In some circumstances, the potential economic and social implications — as accurately or inaccurately perceived by many citizens — are likely to range well beyond this evaluative framework. In bank and airline mergers, for instance, rationalization of networks, reduction of excess capacity, and various other economies of scale and scope were claimed as likely benefits of the mergers. For individual citizens, however, these efficiencies often translate into branch closings in smaller communities, staff layoffs, and reduced airline service to smaller communities. These events, coupled with a perceived reduction in competitive offerings in these industries, may well provoke intense public concern. Furthermore, in both industries, major public policy issues arise with respect to foreign competition and foreign ownership, requiring fundamental re-evaluation of long-standing government policies restricting foreign participation in these sectors.

Many potential effects of a proposed transportation sector merger would be addressed under the *Competition Act* process. Some related issues would not be considered, however, particularly in respect of a transnational merger. For example, a merger could lead to a more integrated North American rail network where the Canadian and U.S. portions of the network owned by one company would have to compete with each other for capital investment. If the Canadian portion of the network lost out in that competition, it could lead, over time, to a serious deterioration of the Canadian network. Another possible outcome might be the diversion of traffic to U.S. ports, significantly reducing economic activity at Canadian ports.

These are clearly issues of national interest. Transportation is key to the functioning of all sectors of the economy and the competitiveness of Canadian industry in the global marketplace. The rail and air sectors tend to be served by a small number of large enterprises. Restructuring as a result of mergers has the potential to affect the price and level of transportation services significantly. In its submission to the Panel, the Competition Bureau stated:

> Competition law is directed at a person or persons engaged in anti-competitive acts that have the effect, or are likely to have the effect, of substantially preventing or lessening competition. It cannot address typical problems associated with a natural monopolist, such as high prices, insufficient supply, inadequate service or types of services, high or low profitability, absence of entry into the industry and insufficient investment, etc.[3]

This leaves a significant gap. The Panel therefore believes it is both prudent and justified to allocate the time and resources required to review the public interest implications of a proposed transportation sector merger and to ensure that it is right for Canada as a whole.

Considerations and Recommendations

The Panel heard several proposals to address the lack of a public interest review. The most frequent suggestion was to give the Canadian Transportation Agency authority to review mergers.[4]

Re-establishing a merger review role for the Agency would mean either giving the Agency sole responsibility for reviewing transportation mergers — much like the U.S. Surface Transportation Board — or giving the Agency overlapping authority with the Competition Bureau, as was the case under the *National Transportation Act* until 1996. Neither option appears practical. In the first alternative, the Agency's consideration would inevitably be based to a significant extent on subjective public interest criteria rather than the Competition Bureau's assessment of the effects of a proposed merger on competition. The second alternative, with overlapping roles of the Bureau and the Agency, could lead to conflicting decisions.[5]

CN suggested yet another approach, amending the *Competition Act* to give the Minister of Transport authority to intervene and make submissions to the Commissioner of Competition during the Bureau's review process. The Commissioner would be required to take those submissions into account when reviewing the proposed merger, but would continue to be guided by the mandate to protect and enhance competition. The Panel believes, however, that such a process would transform the review from one based on applying an economic test to one that includes a public interest consideration; this would inevitably compromise the Competition Bureau's ability to assess a merger's competitive impact objectively.

The *Competition Act* process works well, offers predictability and encourages competition without the burden of ongoing monitoring and further regulatory intervention. The Panel concludes that it is important to maintain the integrity of this process for evaluating objectively whether a proposed merger in the transportation sector would prevent or lessen competition. The Panel's view is that a new process for reviewing proposed transportation mergers, either within modes or cross-modal, should be established to examine issues of broad national or transnational interest. To do so requires establishing a broader public interest review process separate from the *Competition Act* process.

A public interest review process should have the following characteristics:

- The process must be open, and the public should have opportunity for input.
- Carriers should be encouraged to be innovative in addressing public interest concerns.
- Approval of transactions could be made conditional — for example, a merged carrier could be required to divest infrastructure or routes or to commit to service levels.
- The process must include post-transaction monitoring for compliance and authority to enforce conditions.

Under the Panel's proposal, parties to a proposed merger would notify the Minister of Transport at the same time they notify the Commissioner of Competition. The notice to the Minister would include a statement of public interest impact, which would include

- the objectives of the merger;
- the parties' assessment of the potential impact of the merger on the competitiveness of the transportation sector concerned and on the competitiveness of industry sectors it serves;
- possible costs and benefits to shippers or passengers;
- implications with respect to network rationalization and the labour force;
- the regional impact of the merger;
- the impact of the proposed merger on the overall structure of the transportation sector concerned; and
- remedial or mitigating actions proposed by the merging parties to address public interest concerns.

A detailed statement of public interest impact would open the important elements of the proposed merger to public scrutiny and allow the Minister to decide whether a public interest evaluation is required and, if one is required, who should do the evaluation. The statement would also oblige the parties to consider any potential adverse impacts of the transaction and to be proactive in suggesting remedial actions to address them.

If the Minister of Transport concluded that the proposed merger raised significant public interest issues, the Minister could appoint a public interest evaluator to evaluate the proposed merger. This would give the Minister flexibility to determine, on a case-by-case basis, whether a public interest evaluation is necessary.

Public interest issues will vary, depending on the merger proposal. The Minister should therefore have flexibility in selecting the public interest evaluator for each review. In some situations, the Agency may be the appropriate authority, because it may have the necessary expertise available in-house. In other situations, however, an individual or a small panel of experts might be more appropriate.

In appointing the evaluator, the Minister would establish an appropriate time frame for considering the public interest issues identified for evaluation. The public interest evaluator would have the authority to hold hearings on those issues.

The public interest evaluator and the Competition Bureau would also have legislative authority to exchange information and to discuss and co-ordinate their respective investigations. This would allow the evaluator and the Bureau to consider a co-ordinated set of remedies to address public interest and competition concerns. Similarly, if a proposed merger is transnational, the evaluator would be encouraged where feasible to co-operate with regulatory authorities in other countries to exchange information.

Parties to a merger could amend the terms of the proposed merger in response to concerns raised by the public interest evaluator with respect to public interest issues, or by the Competition Bureau with respect to competition issues.

At the conclusion of the evaluation, the public interest evaluator would report to the Minister, recommending, with respect to public interest issues, that the proposed merger

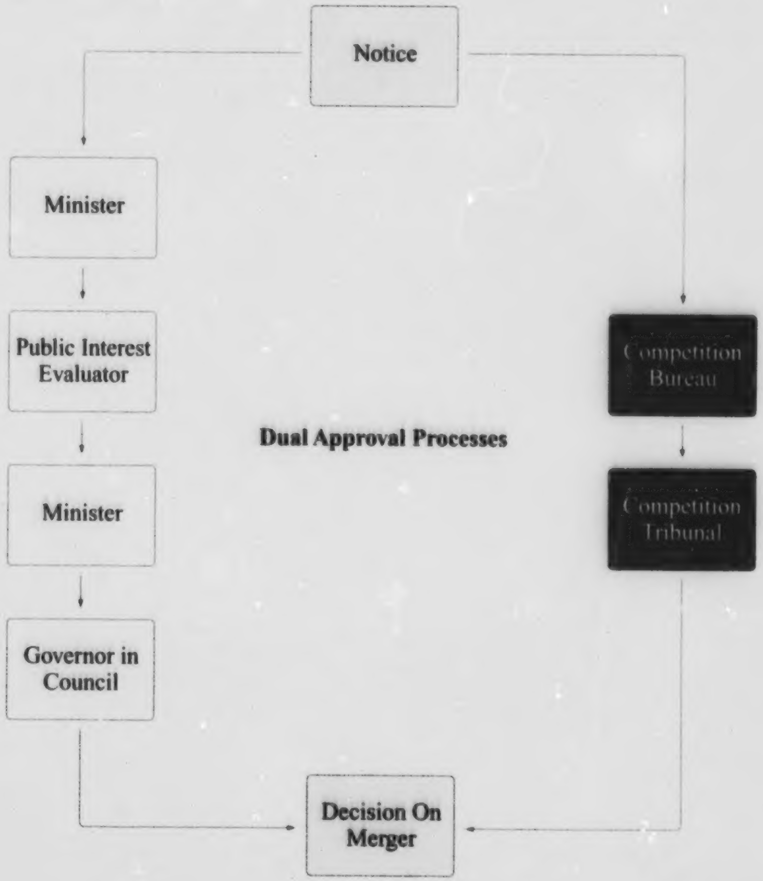
- be allowed to proceed;
- be allowed to proceed, subject to specified conditions; or
- not be allowed to proceed.

After receiving the evaluator's report, the Minister would review it and make a recommendation on the proposed merger to the Governor in Council. This would make decisions about broad national interest the responsibility of the

Governor in Council. Issues related to the lessening of competition would continue to be determined under the *Competition Act* process. For a merger to proceed, the Governor in Council would have to be satisfied that there are no outstanding public interest issues, and the Competition Tribunal would have to be satisfied that any issues relating to a potential lessening of competition have been addressed. Because the scope of the two review processes would not overlap, there could be no conflicting decisions. Figure 6.2 illustrates the relationship between the two processes.

Proposal for Merger Reviews
Competition and Public Interest Issues

Figure 6.2


Notice
Minister
Public Interest Evaluator
Minister
Governor in Council
Competition Bureau
Competition Tribunal
Dual Approval Processes
Decision On Merger

+1

If the Governor in Council attached conditions to protect the public interest, the Minister of Transport would have the authority to set up a monitoring and enforcement process to ensure compliance, giving the Minister flexibility to determine the process required and the appropriate authority to carry it out. The appropriate authority might be the Agency, Transport Canada or another authority. Under the approach proposed by the Panel, a merger could be disallowed by the Governor in Council on public interest grounds, notwithstanding that the Competition Bureau/Tribunal may have not disallowed the merger in question for competitive reasons. The reverse situation would also apply.

The Panel's proposals are summarized in the following recommendations.

> **Recommendation 6.1**
> **The Panel recommends the establishment of a new process for reviewing proposed transportation mergers, either within modes or cross-modally, to examine issues of broad national or transnational interest separately from competition issues considered under the merger review provisions of the *Competition Act*.**
>
> **Recommendation 6.2**
> **The existing *Competition Act* process should continue to be used to evaluate whether a proposed merger in the transportation sector would prevent or lessen competition.**
>
> **Recommendation 6.3**
> **The proposed public interest review process would have the following steps:**
>
> 1. **Parties notify the Minister of Transport of the proposed merger at the same time notice is served to the Commissioner of Competition.**
> 2. **The notice to the Minister includes a statement of public interest impact, including**
>   - **the objectives of the merger;**
>   - **the impact of the merger on the transportation sector concerned and on the industry sectors it serves;**
>   - **possible costs and benefits to shippers or passengers;**
>   - **implications with respect to network rationalization and the labour force;**
>   - **the regional impact of the merger;**

-2

- **the impact of the proposed merger on the overall structure of the transportation sector concerned; and**
- **remedial or mitigating actions proposed by the merging parties to address public interest concerns.**

3. **If the Minister concludes there are significant public interest issues related to the proposed merger, he/she would appoint a public interest evaluator to evaluate the proposed merger.**
4. **The public interest evaluator evaluates public interest issues identified by the Minister, based on the statement of public interest impact provided by the parties to the proposed merger, and can hold hearings to receive input on public interest issues.**
5. **Parties to a merger may amend the statement of public interest impact in response to concerns expressed by the public interest evaluator on public interest issues.**
6. **The public interest evaluator interacts with the Competition Bureau to discuss and co-ordinate their respective investigations.**
7. **At the conclusion of the evaluation, the public interest evaluator reports to the Minister, recommending, with respect to public interest issues, that the proposed merger**
    - **be allowed to proceed;**
    - **be allowed to proceed, subject to specified conditions; or**
    - **not be allowed to proceed.**
8. **After receiving the report of the public interest evaluator, the Minister reviews it and makes a recommendation to the Governor in Council.**
9. **Approval should be subject to any conditions the Governor in Council considers relevant to protect the public interest.**
10. **Where the Governor in Council approves a merger subject to the parties to the merger meeting conditions to protect the public interest, a process to ensure compliance through monitoring and enforcement must be put in place.**
11. **The Competition Bureau and the public interest evaluator should be encouraged to work closely with the appropriate authorities in other countries when considering transnational mergers.**

The Panel believes that the same merger review process should apply to all transportation modes under federal jurisdiction. Retaining separate processes for different transportation sectors would imply that there is a different rationale for review of mergers in those sectors. In fact, concerns about the potential impact of a merger are not markedly different, so there is no reason to retain different processes.

Recommendation 6.4
The Panel recommends that the proposed merger review process apply to all transportation modes under federal jurisdiction.

Notes

[1] A detailed description of North American rail industry restructuring is provided in R.L. Banks & Associates, Inc., "North American Railway Restructuring and Implications for Merger Policy", paper prepared for CTAR, February 27, 2001.

[2] The Competition Bureau must be notified if the parties to a proposed transaction, and their affiliates, have combined Canadian assets, or annual sales from those assets, exceeding $400 million and if the Canadian assets being acquired, or annual sales from those assets, exceed $35 million ($70 million in the case of an amalgamation).

[3] Competition Bureau, November 17, 2000, p. 12.

[4] See, for example, submissions by the Canadian Shippers' Summit and the provinces of Alberta and Nova Scotia.

[5] This situation arose in 1995 under the *National Transportation Act, 1987*, when CP Containers (Bermuda) purchased the assets of The Cast Group. The Agency found that the transaction was not against the public interest and chose not to disallow it. The Competition Commissioner, on the other hand, determined that the transaction would prevent or lessen competition and sought to have the transaction dissolved. The matter was resolved when a competitor entered the market and the Competition Commissioner's application was dismissed.

This chapter also draws on the following research prepared for the Panel:

WESTAC, "Understanding Competitive Rail Access and Position Profiles", paper prepared for CTAR, February 20, 2001.

Chapter 7
The Airline Industry

Following Air Canada's acquisition of Canadian Airlines International, the ability of the domestic airline industry to give Canadian consumers high-quality service at a reasonable price became a major focus of attention and concern. Legislation that took effect on July 5, 2000, sought to address some of these concerns:

- Revisions to the *Canada Transportation Act* gave the Canadian Transportation Agency stronger powers to monitor prices on monopoly routes and to oversee the terms and condition of carriage.
- Amendments to the *Competition Act* gave the Competition Bureau additional powers to address airline-specific anti-competitive acts and to ensure potential entrants have access to essential facilities.

Airlines must now provide longer notice if they intend to terminate service to small communities. In addition, the government created an Independent Transition Observer on Airline Restructuring and an Air Travel Complaints Commissioner at the Agency. Both have released their initial report.[1]

With recent legislation aimed at controlling Air Canada's market power, Canadian policy has turned 180 degrees from earlier years, when Air Canada was an instrument of government policy and the focus was on protecting the country's national airline from undue competition. Throughout the 1980s, government dismantled most of the restrictions limiting the ability of Canadian carriers to respond to market forces, paving the way for development of a competitive industry offering more frequent flights, fares that better reflected airlines' costs, and a significant range of price and service offerings.

Many countries' airline sectors have weathered a period of consolidation and restructuring in recent years, including the disappearance of major carriers through mergers or bankruptcy. In the United States, consolidation is continuing as major airlines strive to increase the scope and scale of their route networks, strengthen their hubs and expand service on international routes.[2] Airline restructuring has different implications in the U.S. than in Canada, however, where the result leaves one major carrier. Recent developments underscore the challenges of attempting to create conditions to sustain a competitive airline industry in the relatively small Canadian market.

On transborder and international routes, U.S. and other foreign carriers give Canadian travellers additional options. Submissions to the Panel focused almost exclusively on domestic markets, yet transborder and international traffic accounts for more than half the industry's revenues and recently has been the area of strongest passenger growth.

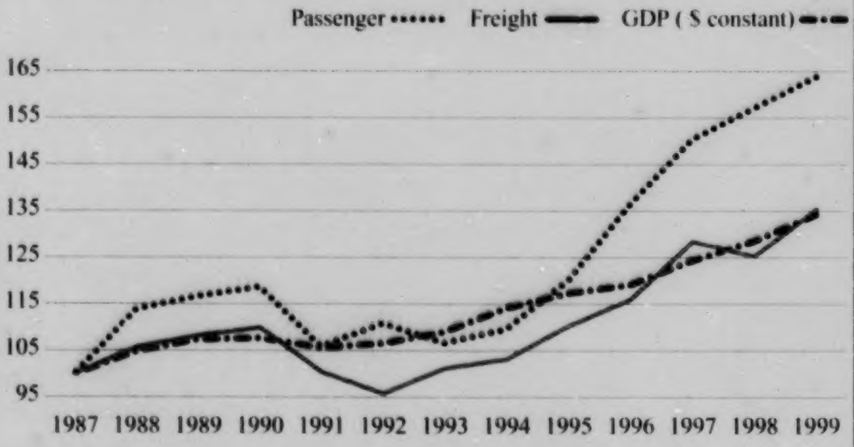
Market Developments

Traffic Trends

Dramatic changes in industry structure have occurred against the backdrop of strongly growing airline activity. Growth in air passenger traffic has outstripped growth in the overall economy. The increase in passenger output from 1987 to 1999 (measured by an index based on passenger-kilometres travelled[3]) was almost double the growth in constant dollar gross domestic product. Air cargo output growth over that period matched GDP growth (Figure 7.1).

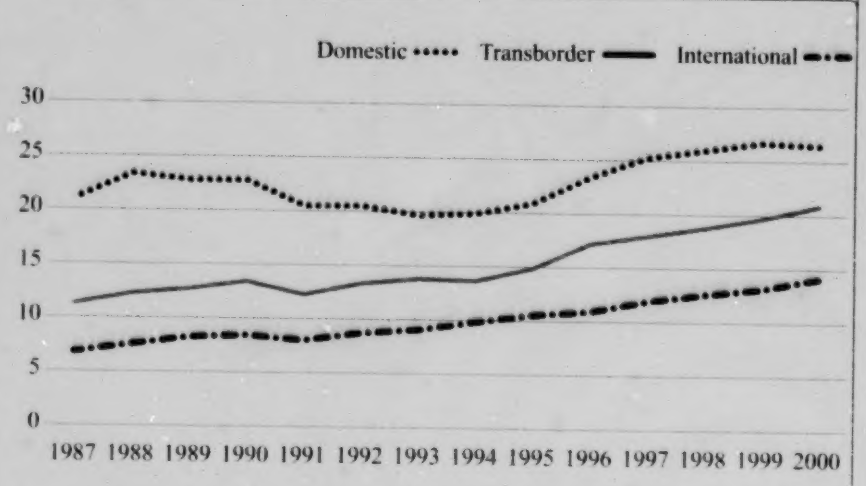
Air Industry Output and GDP

1987 = 100



Source: Transport Canada and Bank of Canada Review.

Air Passengers by Sector 1987–2000
millions



Source: Transport Canada, "Transportation in Canada 2000", p. 168.

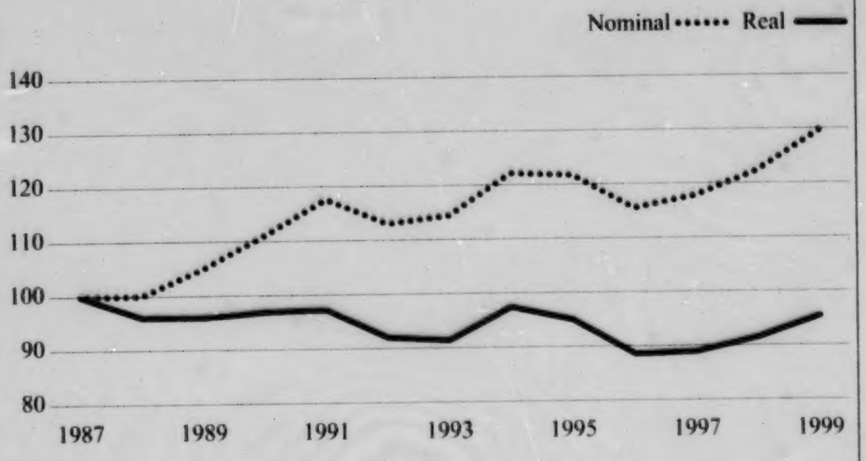
High growth in passenger travel results from strong activity in international and transborder markets, where traffic increased at average annual rates of 5.6% and 4.7% respectively over the 1987–1999 period. Meanwhile, average annual growth in domestic passenger travel, at 2%, was below GDP growth of 2.5%. The influence of the economic cycle on domestic traffic is apparent in Figure 7.2. International and transborder travel experienced more sustained growth, which continued into 2000 according to preliminary estimates.

Moderate increases in fares and declines in freight rates contributed to air traffic growth. The nominal price of air passenger service increased by 2.2% a year on average between 1987 and 1999 (Figure 7.3), which translates into an annual decline in real terms of 0.4% (deflated by the Consumer Price Index). The price of freight services in nominal terms declined by 1.1% a year on average.

These growth patterns are expected to continue. Between 1999 and 2004, growth in aviation demand is projected to continue to outpace real economic growth in international and transborder passenger and air cargo markets and to lag behind overall economic growth in the domestic market (Figure 7.4).[4]

Price Index for Air Passenger Service

(1987 = 100)



Source: Transport Canada.

Over the next 20 years, passenger traffic will grow at an estimated rate of 3.1% annually and freight traffic at a rate of 4.8%. Total arriving and departing flights (itinerant aircraft movements) of 5 million in 1999 are projected to grow by 1.7% per year. Slower growth in the number of flights compared to air traffic reflects expectations of a trend toward using larger aircraft and higher load factors.

The Domestic Market

Air Canada has always been the largest carrier, initially as the publicly owned carrier, with exclusive rights to serve domestic markets, and latterly, since relaxation of entry and pricing restrictions, by success over domestic competitors. With the acquisition of Canadian Airlines International, Air Canada moved from the 18th to the 12th largest passenger airline in the world and the 7th largest in North America. While restructuring will take some time to complete, since the beginning of 2000, Air Canada has made progress in integrating CAI's operations, including those of its regional carriers:

- Route schedules have been redesigned and airline capacity redeployed to eliminate duplication and improve aircraft utilization.

Projected Growth in Aviation Demand

Average annual % change 1999–2004*

	Passenger	Air Cargo
Domestic	2.4	3.0
Transborder	4.2	5.2
International	5.2	6.6
Average	3.2	5.0

*Assuming economic growth of 3.2% a year and population growth of 0.8%.

Source: Transport Canada, preliminary forecasts presented at Aviation 2000 Workshop.

- CAI's regional airlines and cargo operations have been merged with Air Canada's.
- Operating, maintenance and administrative functions have been amalgamated.
- Airport operations, including those at Air Canada's Toronto hub, have been integrated.

The other major development in the domestic market has been expanded service by medium-sized carriers. WestJet, Western Canada's discount carrier, which began operations in February 1996 and has recently extended its services into Eastern Canada, has been Canada's fastest growing and most financially successful independent carrier. The largest independent is Canada 3000, a 12-year-old airline that has gone from being a charter carrier to a significant provider of low-cost scheduled service. With its recent acquisition of Royal Airlines and CanJet Airlines, Canada 3000 has become a more important player in the domestic industry. Air Transat, Canada's largest charter-type carrier, has been expanding its domestic service as well.[5]

Most recently, new entrants have begun service, including Capital City Air, an Edmonton-based carrier, while small regional carriers like Hawkair and Peace Air have expanded their service.

This expansion has created new options for travellers, but it has not significantly affected Air Canada's position as the dominant carrier. Early in 2001, Air Canada estimated that it had a 90% share of Canadian travel agency sales and a 75% share of seat capacity in the domestic market.[6]

After Air Canada gained control of CAI, it became the sole carrier on the majority of the top 200 domestic routes.[7] As of August 2000, Air Canada accounted for 80% or more of the capacity on 11 of the top 25 domestic routes and at least 50% of the capacity on 22 of the routes.[8]

Niche and fringe carriers serve mainly leisure travellers and some less time-sensitive business travellers in major markets. Air Canada has important competitive advantages in the general business market, where travellers value the airline's flight frequency, seamless service, frequent flyer points and other amenities. Canada 3000 is targeting business travellers on selected city routes, but it does not pose a major threat to Air Canada's dominance of this segment.

Competition is also limited in the markets served by Air Canada's regional airlines. After trying unsuccessfully to find a buyer, Air Canada absorbed CAI's regional affiliate in August 2000, then subsequently incorporated it — along with Air Ontario, Air Nova and Air BC — as Air Canada Regional Inc. early in 2001. Although the regionals play an important role as feeders to Air Canada, more than 65% of their customers use the airlines for local travel. In most local and regional markets, there is no alternative scheduled or charter service. These markets appear 'contestable', but prices are generally not subject to competition from other market participants.

Transborder and International Markets

Since the signing of the 1995 Open Skies agreement — allowing Canadian and U.S. carriers virtually unrestricted access on transborder routes — air traffic between Canada and the U.S. increased substantially, from 13.6 million passengers in 1994 to almost 20 million in 1999. Canadian carriers, which have strengthened their competitive position in this market since the agreement, now account for about half the transborder traffic. Air travel in this segment will be facilitated further by the Canada-U.S. Air Travel Agreement, signed at the beginning of 2001, which will expand pre-clearance services at Canadian and U.S. airports, as well as in-transit pre-clearance for third-country passengers travelling to the U.S. by way of a Canadian airport.[9]

Most travellers have choices on transborder routes. As of December 31, 2000, Canadians flying to the U.S. had access to two or more U.S. carriers, along with at least one Canadian carrier, at eight airports. Transborder routes from Toronto, Vancouver and Calgary were served by nine, eight and six U.S. carriers respectively. While only one or two carriers offer direct flights from

Canadian airports to many specific U.S. destinations, the availability of connecting services through U.S. hubs limits the prices that can be charged for non-stop services between Canada and the U.S.

International air passenger services are governed by some 70 bilateral agreements between Canada and other countries. The agreements specify the rights of carriers on international routes, including cities to be served, aircraft to be used, and frequency of service to be provided. Canadian policy has been to designate one Canadian carrier to serve a destination until an international route generates more than 300,000 one-way origin-destination passengers annually, and to subject all route rights to a 'use it or lose it' requirement. Following Air Canada's acquisition of CAI, the Minister of Transport suspended the use it or lose it provision temporarily. The government also negotiated the transfer to Air Canada of virtually all of CAI's international route rights and slots at New York's La Guardia and Chicago's O'Hare airports.

Bilateral agreements ensure that international traffic is shared among designated carriers. Most of Canada's international traffic originates and terminates in Toronto, Montreal and Vancouver, and each of these cities is served by a large number of international carriers: Toronto by 22 international airlines, Montreal (Dorval) by 15, and Vancouver by 12 (as of December 31, 2000). Canadian carriers are estimated to account for 50% of the scheduled traffic on routes between Canada and Europe, 55% of the traffic on Asian routes, and 70% of the traffic on routes to the Caribbean and South America.

Air Canada's acquisition of CAI has not affected transborder and international markets in the same way as domestic markets, but it has affected competition among the global airline alliances vying for international traffic. Air Canada belongs to the Star Alliance, the largest group, whose senior North American member is United Airlines. The world's five major alliances account for an estimated 57% of all passenger traffic (measured by revenue-passenger-kilometres); the Star Alliance alone accounts for 21% of global industry output.[10] CAI belonged to OneWorld, the second largest group, which includes American Airlines and British Airways.

Through alliances, airlines gain access to larger international networks, and membership in an alliance tends to enhance an airline's productivity and profitability.[11] Competition may be weaker, however, in markets served by partner airlines. In the current Canadian circumstances, transborder and international competition has been somewhat reduced because of the significant advantage Air Canada's well developed domestic feeder network gives members of the Star Alliance.

Evidence suggesting that Air Canada may be charging higher interline fares to non-Star Alliance foreign carriers lends support to the concern that its dominance in domestic markets is affecting competition in transborder and international markets. The UK Civil Aviation Authority, for instance, reports that Air Canada increased the interline fare offered British Airways on the Toronto-Ottawa route segment from the $389 charged by CAI to $1,189.[12] Such practices can reduce travel options and inhibit effective competition.

Impediments to Competition

Competition from independent carriers can potentially have a major influence on airline fares. In the United States, for example, Southwest Airlines has exerted strong downward pressure on prices since deregulation: "actual, potential and adjacent competition" from Southwest Airlines has accounted for an estimated 40% (amounting to US$9.7 billion) of the annual savings from lower real fares from deregulation.[13] The evidence is less dramatic in Canada, but here too, research shows that competition from a low-cost carrier tends to reduce air fares.[14] The benefits of competition cannot be enjoyed by all Canadian passengers; many markets are simply too small to support more than one carrier. On routes where it is feasible, however, competition may not be realized because of the formidable impediments confronting existing independent carriers and new entrants.

The high-risk nature of the airline industry tends to discourage entry. Because airlines have high fixed costs relative to revenues, a small change in load factors or fare levels can have a large impact on profits. The industry is therefore highly vulnerable to an economic slowdown. Among the independent carriers, WestJet stands out for its success in controlling costs and sustaining profitability.

The greater risk for independents and new entrants arises from the difficulties of competing with a large carrier with strong market advantages. Among Air Canada's strengths are its extensive domestic network, its ability to offer frequent flights, its control over the main available frequent flyer program, its well developed marketing and distribution system, and its favourable position at Pearson, Canada's major airport and the hub for domestic air traffic. Air Canada has been very successful in combining a marketing strategy aimed at attracting business travellers with a sophisticated yield management system that allows it to adjust fares to appeal to more price-sensitive travellers.[15] With the takeover of CAI, Air Canada has a denser network that should produce cost savings from better aircraft utilization (including larger planes, higher load factors, and increased aircraft use) and more efficient use of ground personnel and equipment.

Legislative change in the summer of 2000 aimed to reduce industry entry barriers. Under the law — and consistent with undertakings Air Canada made to gain approval of its CAI acquisition — Air Canada has given up a number of peak-hour slots at Pearson and made available facilities at selected airports where it had preferred or exclusive use of more than 60% of facilities. Air Canada must also offer interlining and joint fares to other Canadian carriers belonging to the International Air Transport Association and, for a five-year period, sell access to its Aeroplan to Canadian carriers below a size threshold ($250 million in domestic passenger revenues). In addition, amendments to the *Competition Act* give the government greater authority to address airline-specific anti-competitive acts and ensure access to essential facilities, including take-off and landing slots, interline arrangements, airport gates, loading bridges, counters and related airport facilities, maintenance services, and baggage handling infrastructure, equipment and services.

These reforms are important, although the Panel believes there is scope for additional measures in some areas (discussed later in the chapter). Over the longer term, vigilance by the Competition Bureau may well provide the most important check against practices that limit entry to airline markets. Experience in Canada and elsewhere suggests, however, that the best hope for developing competitive markets rests ultimately with talented airline managers who can design and implement a business model that makes sense in the context of market realities.[16] Southwest Airlines in the U.S. and, on a smaller scale, WestJet in Canada offer examples of successful strategies for pursuing market opportunities. Both have been a significant constraining influence on major carriers' activities in their markets.

The government must ensure that, where Air Canada is in a position of dominance, it does not abuse its market power. Beyond that, the role of government is to establish an environment that fosters the entrepreneurship needed to build a more competitive airline sector.

Considerations and Recommendations

Several submissions to the Panel offered suggestions for enhancing competition in the airline industry. Some groups recommended action to address specific competitive impediments; others proposed broader reforms, including removal of restrictions that prevent foreign airlines from competing in the domestic market. Several observers recommend removing legislative restrictions on foreign ownership of airlines operating within Canada.

The Panel is sympathetic to the view that the airline industry, like other sectors of the economy, should be subject to the stimulus and discipline of foreign competition. Greater competition in domestic and international aviation would make airlines more efficient and bring lasting benefits for users. Recognizing the growing integration of the North American and the world economies, a desirable objective would be a world — or at least a continental — market in air transport services. There is no guarantee of the type and amount of services Canadians would supply in this larger market, but the Panel is confident that Canadian providers have the ability to find their place in a broader North American and world marketplace.

It is also readily apparent, however, that airline markets do not conform to this vision of a free and competitive system. International markets are still dominated by the *Convention on International Civil Aviation* (the Chicago Convention) and its government-directed bilateral agreements. Despite the Open Skies agreement, the U.S. domestic airline market remains closed to non-nationals. Against this background, the Panel recommends a medium-term policy approach for the airline sector that can be pursued through negotiations with the United States and other countries, along with more immediate actions to enhance competition in the domestic market.

Pursuing the Benefits of Foreign Competition

The Panel considered two proposals for unilateral action to introduce foreign competition in the domestic market without violating Canada's bilateral agreements or the Chicago Convention. The first proposal — termed 'modified sixth freedom rights' — would allow a U.S. carrier to fly passengers from one point in Canada to another point through a U.S. interchange. For example, a U.S. carrier could offer a service from Toronto to Vancouver via Minneapolis. A U.S. airline can currently sell a trip from Toronto to Minneapolis and a second trip from there to Vancouver, but the two cannot be marketed and sold as a single ticket.

The second proposal would create a new class of domestic carrier that could be 100% foreign-owned. Australia took this step in June 1999. Since the new class of carrier would be allowed to fly only in Canada, the argument that ownership restrictions are needed to designate national carriers under bilateral and international agreements does not apply.

These reforms, recommended by the Commissioner of Competition and others, might attract some foreign entrants to the domestic market. By opening the domestic market to foreign carriers, Canada would gain access to a broader pool of airline entrepreneurial and management talent. Participation by foreign carriers is, however, likely to reduce opportunities for independent Canadian airlines. While Air Canada has competed successfully against U.S. carriers in the transborder market, it is still in a transition period, absorbing the adjustment costs associated with its acquisition. Air Canada would also be handicapped temporarily by its legally enforceable undertaking not to lay off or relocate unionized workers for two years after the takeover and to serve all domestic points previously served by the two airlines for three years.

Modified sixth freedom rights could also seriously affect the Canadian air cargo industry. Under the 'scope clause' in their contracts with pilots, Federal Express, UPS and other U.S. companies are bound to use their own aircraft and pilots on all jet category routes into their hubs and all routes where they have a right to fly. With modified sixth freedom rights, there would be less demand for Canadian carriers to provide trans-Canada flights for U.S. cargo/courier companies.[17]

Balancing these considerations — and taking account of the rigidities of the international regime in air transport (especially U.S. reluctance to give any foreign carrier access to its lucrative domestic market without major offsetting concessions) — the Panel opposes unilateral action to allow foreign entry at present. The Panel believes that the government should instead pursue foreign competition by negotiating for liberalization of air services. A priority should be to expose air services to the benefits of North American free trade.

> **Recommendation 7.1**
> **The Panel recommends that the government enter into negotiations with the United States and Mexico to create a North American Common Aviation Area in which carriers from Canada, the U.S. and Mexico would compete freely.**

> **As a back-up option if negotiations do not succeed, the Panel recommends that the government negotiate with other countries for the reciprocal granting of modified sixth freedom rights and of rights of establishment for foreign-owned domestic carriers.**

Under the first proposal, Canadian, Mexican and U.S. carriers could compete in each other's domestic market. The rights of establishment proposed as a back-up option would be extended to any country prepared to offer equivalent rights to Canada. Foreign carriers that took advantage of the right would have to establish separate Canadian subsidiaries that employ Canadian workers, pay taxes, and operate generally under the same conditions as Canadian-owned airlines.

Bilateral negotiations have been successful in expanding choices for Canadian passengers on transborder and international routes, and the Panel believes they can be effective in strengthening competition in the domestic market. If negotiations fail, however, the government must be prepared to adopt another course of action. By 2005, it should be apparent whether negotiations with the U.S. and/or other countries are likely to result in stronger competition in the domestic market and increased opportunities for Canadian carriers, or whether a different approach is required.

Promoting Multilateral Reforms

Along with pursuing bilateral negotiations, the government should support multilateral initiatives to liberalize trade in air services. The World Trade Organization is reviewing the air services annex to the General Agreement on Trade in Services, a process that could lead to an easing of restrictions in some areas. The Organisation for Economic Co-operation and Development is exploring options for liberalizing international cargo services. Discussions on air services are also under way in APEC (Asia Pacific Economic Cooperation), which provided the vehicle for a recent multilateral open skies agreement between the U.S., Brunei, Chile, New Zealand and Singapore. Although the latter has run into implementation problems, it does mark a slight shift in stance for the United States, which has traditionally favoured bilateral over multilateral agreements.

> **Recommendation 7.2**
> **The Panel encourages the government to pursue actively Canada's interest in a more liberal international environment for air services.**

In addition to other initiatives, the government should ensure that Canada participates in any negotiations to establish a Transatlantic Common Aviation Area (TCAA). The Association of European Airlines is advocating such an agreement to give airlines in the U.S. and the European Union full commercial opportunities on an equal basis and to substitute a common body of rules for the current fragmented regulatory regime. There has been little progress in gaining support for a TCAA, but Canada cannot afford to be left out of a future accord, given its strong links to the U.S. and some EU members.[18]

Relaxing Airline Ownership Restrictions

Several submissions to the Panel proposed relaxing the current rules restricting the percentage of voting shares in a Canadian airline that foreigners can hold. The Panel agrees that the 25% limit should be raised. This would not guarantee availability of foreign capital, but it would facilitate access to foreign funds.

> **Recommendation 7.3**
> **The Panel recommends that the limit on the voting shares of Canadian airlines that can be held by foreigners be raised to 49%.**

This proposal can be implemented under existing legislation and would not affect Canada's bilateral agreements. Airlines requiring a domestic licence would still need to demonstrate that effective control resides in Canada.

Eliminating Potential Barriers to Entry

Recent legislation addressed several specific barriers to entry, but the Panel sees a need for three additional measures to promote a more level playing field.

First, policy must recognize the importance of assuring new entrants reasonable access to airport facilities. The concern goes beyond limitations in available slots, gates and other facilities that may arise at certain airports at specific times (dealt with in amendments to the *Canada Transportation Act* in 2000). The more general concern is that Air Canada may be in a position to exercise inordinate influence over key airport decisions. Dependent as they are on establishing favourable relations with the dominant carrier, airport authorities may place greater importance on accommodating Air Canada than on giving independent airlines high-quality access at a reasonable price.

The Panel is sympathetic to the view that airports should treat gates and other airside facilities as common use facilities, available for rental by all carriers (as discussed in Chapter 9). In the meantime, to ensure that airport access does not impede market entry, airlines should have recourse for treatment they believe is unfair in terms of price or quality of service.

> **Recommendation 7.4**
> **The Panel recommends that carriers be given recourse to the Canadian Transportation Agency for disputes over access to airport facilities and that the Agency be given power to provide an appropriate remedy in situations where airlines are found to be subject to unfair treatment in terms of prices charged or type and quality of services provided.**

The Agency would likely become involved only in disputes the parties cannot resolve on their own, and its powers would be directed only to resolving situations where airlines had been clearly and significantly disadvantaged. In these circumstances the Agency could issue an order requiring specified improvements in facilities and related services and/or that charges be reduced.

Second, further attention is needed to the competitive advantages Air Canada derives from its frequent flyer plan. Under the legislative provisions requiring Air Canada to sell access to Aeroplan, eligible carriers must have annual domestic revenues of less than $250 million. This is a relatively low revenue ceiling that excludes some independent carriers. Moreover, Air Canada's obligation extends only to 2005. The Panel sees a need to expand coverage and to make access to Aeroplan available as long as Air Canada continues to occupy a dominant position in the domestic market.

> **Recommendation 7.5**
> **The Panel recommends that the maximum annual domestic passenger revenues used to determine eligibility for access to Air Canada's frequent flyer program be raised to $500 million. The Panel recommends further that the requirement to provide access to Aeroplan be extended until the Minister of Transport determines that competition in the domestic market has strengthened to the point where it is no longer necessary.**

Finally, the Panel is concerned about a possible impediment to transborder and international competition if Air Canada charges excessive rates for interlining and other services to foreign airlines outside the Star Alliance. Airlines belonging to OneWorld and other alliances can establish interlining and joint fare agreements with independent Canadian carriers as an alternative to relying on Air Canada. The latter would be a positive development; along with facilitating transborder and international competition, it could help strengthen the position of the independent airlines as competitors in the domestic market. The Panel considered the desirability of regulating interline charges but wanted to avoid recommending any action that might discourage a market-based solution. In addition, regulations limiting interline charges would be difficult to enforce.

These charges will not be an issue if a North American Common Aviation Area is established, and they are likely to be of less concern if rights of establishment are granted to foreign carriers. The Panel's recommendation for a more transparent system, where passengers can readily compare prices on flight options, should also help respond to this issue. The possibility of higher interline charges to non-Star Alliance airlines is of significant concern, however, and specific controls could be required at some point.

Removing Fare Regulation

With recent amendments to section 66 of the *Canada Transportation Act*, the Canadian Transportation Agency has significantly more responsibility for monitoring air fares. The new rules authorize the Agency

1. upon complaint, to review all passenger and cargo fares (instead of just passenger economy fares) on monopoly routes and order corrective action;
2. to order additional fare classes on monopoly routes if these are available on similar competitive routes operated by the carrier; and
3. to audit carriers proactively on its own until July 5, 2002 (and, with Cabinet approval, for another two years after that) and take appropriate action against unreasonable fares on monopoly routes.

The Panel is concerned that the Agency has been saddled with exceedingly complex responsibilities that are difficult to fulfil in a timely and effective manner and that may give rise to conflict with the Competition Bureau's enhanced authority to prevent anti-competitive conduct in the airline industry. Air Canada has a large number of fare classes, and average fares on any given route are determined both by fare levels and by the proportion of seats allocated to different fare classes. It is very difficult to determine whether differences in fares and yields between one route and another reflect the exercise of market power or basic differences in the characteristics of the two markets. Price regulation is a costly and slow process and one that is especially ill-suited to an industry characterized by frequent and rapid price changes. The Agency's efforts to monitor fares and fare classes will impede Air Canada's efforts to implement an efficient yield management system, yet they cannot give consumers effective protection.

The focus must be to create opportunities for competition to develop and grow. In addition, there would be benefits from greater transparency. Passengers should have access to detailed information indicating, for example, the percentage of seats airlines have sold in various markets by major fare classes. Information disclosure can be a significant mechanism for protecting consumer interests. The Panel makes specific recommendations to enhance transparency in Chapter 18.

> **Recommendation 7.6**
> **The Panel recommends that the *Canada Transportation Act* be amended to remove the Canadian Transportation Agency's powers to review passenger and cargo fares on monopoly routes upon complaint; to order additional fare classes on monopoly routes if these are available on similar competitive routes; and to audit carriers proactively and take appropriate action.**

Revising the Merger Review Process

In Chapter 6, the Panel recommended a new process for reviewing major transportation mergers, including airline mergers. Like the current process, the Panel's proposal allows for consideration and weighing of both competition and public interest concerns. The Panel's proposal, however, involves an open process for considering public interest concerns while maintaining independent consideration of competition issues by the Competition Bureau and the Competition Tribunal.

Preparing for Service Termination

Air Canada's legal obligation to continue providing service to communities served by it, CAI and their wholly owned subsidiaries expires on January 4, 2003. Some observers believe that Air Canada will terminate service to a substantial number of destinations at that time, with a significant impact on passengers, communities and small airports.

The Panel recognizes the anxiety created for passengers and communities by service disruptions. At the same time, Air Canada is no longer an instrument of government policy, and it would be inappropriate to impose obligations that reduce its ability to cut costs and compete effectively. Air Canada is feeling the effects of economic slowdown, and its financial performance would be affected adversely by policies that keep it from responding effectively to market pressures.

Canadians have experience adjusting to shutdowns and service termination in other sectors of the economy. Termination of services by Air Canada will prompt governments, other airlines, and providers of alternative forms of transportation to look for ways to respond to the needs of affected communities. The market itself is likely to give rise to lower-cost options for providing service to small communities and less sparsely populated areas. In particular, service termination is likely to create new opportunities for small carriers with equipment and services tailored to meet the needs of small markets.

The Panel is concerned, however, that the Act's notice provisions (120 days) do not allow enough time before January 2003 for needed consultations among governments and other interested parties. With inadequate time for planning, adjusting to service termination will be more difficult.

> **Recommendation 7.7**
> **The Panel recommends that the government require Air Canada to provide 180 days' notice of services it plans to terminate in the first six months of 2003.**

The Panel believes that Air Canada's own interest in softening the impact of route restructuring will encourage it to support the needed preparation and planning.

Meeting Data Requirements

Like other industry observers, notably the Independent Transition Observer on Airline Restructuring, the Panel was struck by the inadequacy of data on the airline industry. Better data would facilitate more in-depth research, would give observers a better basis for assessing the performance of Canadian carriers, and would help participants and potential entrants identify new opportunities. Air sector data problems are part of the broader issue of inadequate data disclosure in the transportation sector, an issue examined in Chapter 18.

Notes

[1] Debra Ward, *The Impact of Airline Restructuring in Canada: First Interim Report*, February 5, 2001; Bruce Hood, *The Report of the Air Travel Complaints Commissioner*, Canadian Transportation Agency, March 2001.

[2] Fred Lazar, "Potential Market Impacts of Liberalization Options on the Commercial Canadian Aviation Industry", paper prepared for CTAR, March 2001.

[3] Transport Canada output indices are described in *Transportation in Canada 1996*, Annual Report, pp. 153–167.

[4] Transport Canada preliminary forecast, presented at Aviation 2000 Workshop.

[5] In the domestic market, there is no legal distinction between scheduled and charter carriers. The charter label reflects a marketing approach and business strategy.

[6] Robert Milton, President and CEO, Air Canada, "Air Canada integration on fast track to gain synergy and benefits despite slow economy in 2001", speech to a Quebec investment seminar, Montreal, February 9, 2001.

[7] Commissioner of Competition, submission to the CTAR, November 17, 2000.

[8] Transport Canada, *Transportation in Canada 2000*, Annual Report, p. 164.

[9] Canadian passengers can be pre-cleared for entry into the U.S. at Dorval, Ottawa, Toronto, Winnipeg, Edmonton, Calgary and Vancouver.

[10] The five include three other global groups: OneWorld, Air France/Delta and Wing, and one intra-Europe alliance, Qualifyer.

[11] Tae Hoon Oum, "Key Aspects of Global Strategic Alliances and the Impacts on the Future of Air Canada and Other Canadian Air Carriers", paper prepared for CTAR, March 2001.

[12] Tae Hoon Oum, "Key Aspects of Global Strategic Alliances".

[13] Steven A. Morrison and Clifford Winston, "The Remaining Role for Government Policy in the Deregulated Airline Industry", in *Deregulation of Network Industries: What's Next*, edited by S. Peltzman and C. Winston, Washington, D.C., AEI-Brookings Joint Center for Regulatory Studies, 2000.

[14] This is discussed in Thomas W. Ross and W.T. Stanbury, "Policy Proposals for Enhancing Competition in Canadian Airline Markets", paper prepared for CTAR, March 2001.

[15] According to one study, the high average yields Air Canada achieved over the 1990s and the low yields CAI achieved was a main factor underlying the success of the former airline and the failure of the latter. Tae Hoon Oum and Chunyan Yu,

"Assessment of Recent Performance of Canadian Carriers," paper prepared for CTAR, February 2001.

[16] This is discussed in Fred Lazar, " Potential Market Impacts of Liberalization Options".

[17] Lazar, "Potential Market Impacts of Liberalization Options".

[18] The TCAA is discussed in P.P.C. Haanappel, "International Aviation Framework and Implications for Canadian Policy", paper prepared for CTAR, March 2001.

Chapter 8
Marine Transport

Marine activity can be divided into two distinct sectors spread across four regions:

- **Domestic shipping**, which is carried out largely on the Great Lakes and St. Lawrence waterway, with coasting trade in Atlantic Canada, tug and barge operations on the west coast, and northern re-supply to destinations north of 60 by vessels operating from the St. Lawrence and on the Mackenzie River system.
- **International shipping**, which calls at east and west coast ports and uses the St. Lawrence waterway to reach the centre of the continent.

Some 11% of Canada's domestic marine activity is located in the Atlantic region, 25% in the Pacific region, and 62% in the Great Lakes and St. Lawrence River. Passenger ferry services, under both public and private ownership, operate in three regions, all of which also have commercial fishing activity. Oil and gas exploration and development occur in the waters off the east coast and in the Arctic, activities that are expected to grow in coming decades.

Canada's marine industry continues to be heavily influenced by world economic conditions, the nature and stability of trade, and the local economies of North America. In international trade, marinc export activities are defined to a great extent by U.S. and overseas (particularly Asian) demand for bulk raw materials, while marine imports increasingly reflect demand for value-added finished consumer goods, many of which are manufactured in other countries.

Marine Infrastructure and Services

As discussed in greater detail in Chapter 9, the *Canada Marine Act* of 1998 enabled the Minister of Transport to implement the 1995 national marine policy, including commercialization of ports and the St. Lawrence Seaway.

Ports

The guiding philosophy of the *Canada Marine Act*, while seeking to improve the overall efficiency of the ports system, was to induce more local governance in planning and operating the major ports and to cede control, and often ownership, of smaller regional ports to local interests. Commercialization of the major ports involved setting up Canada Port Authorities (CPAs). Other ports were divested to provincial, local (municipal) or user interests, while a number of remote northern ports continue to be administered by Transport Canada. In addition to establishing a framework for CPAs, the *Canada Marine Act* set up a legislative scheme for public ports and public port facilities. The government was left with a residual regulatory power.

CPAs are independently managed, self-sufficient ports, deemed essential to domestic and international trade. Collectively they make up the National Ports System, which now includes 18 CPAs, with more to be added soon. CPAs do not receive government appropriations. Each authority's financing abilities are set out in its letters patent. CPAs make lease payments to the Crown, which retains ownership of the lands occupied by the port, and the pledging of land or other assets for borrowing purposes is precluded.

CPAs include such major ports as Vancouver, Montreal, Halifax, Quebec City, Toronto, Fraser River and Saint John. They are by no means homogeneous, varying widely in terms of the size of operations, type and size of markets served, and financial and human resources. The ports designated as CPAs account for more than 50% of the total tonnage handled by the port system. Vancouver and Montreal are the busiest facilities, accounting for more than 56% of the revenues generated in 1999 by the 17 ports designated as CPAs in that year.

The program of divesting smaller and regional ports resulted in the reduction of subsidies to the port sector. The divestiture program, which included a one-time appropriation of $120 million to prepare ports for transfer from the Crown, is scheduled to end in March 2002.

Although the *Canada Marine Act* is still relatively new, concern has been expressed in several quarters that the commercialization process, particularly for the CPAs, did not go far enough in allowing fuller autonomy.

St. Lawrence Seaway

As a second key element of its commercialization policy, the government transferred management and operations of the St. Lawrence Seaway to a private sector not-for-profit management group. The St. Lawrence Seaway Management Corporation (SLMC) — made up of a group of companies that are Seaway users — assumed responsibility for operating the Seaway in October 1998.

The SLMC is required to protect the integrity of the Seaway, promote a commercial approach to its operation, protect the long-term viability of the Seaway as an integral part of national transportation infrastructure, promote use of the Seaway, and encourage user involvement in the Seaway's operation. The SLMC also sets toll policy and levels.

The Panel found intervener views on governance of the St. Lawrence Seaway generally positive; interveners saw commercialization as successful. Results to date — which include meeting revenue targets in each of the first three years of commercialization — bear out this view.

Marine Navigation, Ice-Breaking and Dredging

Marine navigation services — including the provision and setting of buoys and signals and traffic control in busy channels — plus ice-breaking services for channels and ports are provided by the Canadian Coast Guard, under the authority of the Minister of Fisheries and Oceans.

In 1996 the government introduced user fees to recover part of the cost of Canadian Coast Guard navigation services to shipping. Fees for ice-breaking services were instituted in certain areas in 1998. Simultaneously, there was a general withdrawal from channel dredging. Dredging now depends on the payment of fees that are assessed through the ports.

Fee structures were modified in 1998, and a three-year moratorium was placed on fee increases. This was accompanied by a 50% reduction in the proposed revenue target for ice-breaking fees. The Department of Fisheries and Oceans has struck an internal task group to examine marine navigation and ice-breaking fees in light of the end of the moratorium later this year.

At present, the overall cost of these public services is still met mostly — about 80% — by government rather than users.[1] This contrasts with full cost recovery in air navigation operations.

Concerns about Infrastructure

Several participants in the Panel's consultations, representing both public and private sectors, believe the government must give immediate attention to the difficult competitive circumstances facing the marine industry and ensure that funding of public marine infrastructure is provided on a sustained basis.

Interveners' concerns about future competitiveness centre on the availability of adequate funding for marine and port infrastructure, as well as fiscal and regulatory requirements. Contributing to the uncertain financial future facing shipping are pilotage costs, marine navigation and ice-breaking services fees, and taxation of CPAs by various levels of government.

Some parties argued that fee changes, specifically the reduced revenue targets for ice-breaking, serve to unbalance the impact between navigation fees and ice-breaking fees, to the alleged detriment of ports and shipping services operating in eastern non-ice regions.

Issues and Concerns about Ports

Some interveners — mainly but not exclusively from the port community — identified several concerns about governance of the newly commercialized ports. In particular, they argued that conditions placed on CPAs in their letters patent — especially on levels of borrowing, disposition of lands, and the requirement to make payments to various levels of government — impede the effectiveness and financial viability of the CPAs. This has placed certain ports at a competitive disadvantage, they argued, contrary to the spirit of the national marine policy.

The other major concern was increasing competition for Canada's container ports from U.S. ports and the need to upgrade facilities to meet it. Lack of a funding commitment in Canada, coupled with recently announced government funding of U.S. marine infrastructure, principally ports, under the TEA-21 initiative, might exacerbate an already unlevel playing field. Several solutions were suggested, particularly with regard to funding:

- allowing port authorities to issue revenue bonds,
- establishing a central port development fund,
- permitting government/port joint ventures, and
- allowing port authorities to retain operating surpluses for infrastructure investment purposes.

Given the number and relative complexity of these issues, as well as other more minor issues related to particular sections of the *Canada Marine Act*, some parties (both port and non-port) urged the Minister of Transport to authorize an earlier review of the CMA than the 2003 exercise now mandated by Parliament. These parties also argued that the *Canada Marine Act* does not give CPAs the necessary tools to meet the goals of national marine policy; waiting for the 2003 review would place some CPAs in a severely disadvantaged situation relative to U.S. ports.

On the issue of transborder competition, although it is true that Vancouver competes with Seattle and Tacoma for container cargoes and Halifax and Montreal compete with New York, Baltimore and Philadelphia, it is probably too early to determine whether the *Canada Marine Act* has had a negative effect. On the evidence to date, Montreal, Halifax and Vancouver have enjoyed strong years of growth in both containerized and non-containerized cargoes. More to the point, Vancouver has succeeded consistently in recapturing Canadian container cargo from Puget Sound ports in Washington, while Montreal continues to enjoy a large volume of U.S. traffic. The state-of-the-art terminal at Vancouver's Deltaport has much to do with that port's recent success, and improved rail services and rates have contributed to the success of all three Canadian ports.

Modern, efficient terminal facilities are essential if ports are to be competitive in the container and, increasingly, in the bulk business. Future trade flows and attendant unit costs of imported or exported goods dictate that ports be able to move quickly to upgrade, modernize and develop new handling capabilities. Ports also need access to capital for dredging, environmental compliance and other facilities-related projects. A flexible administrative system appears critical to achieving these objectives.

In the larger matter of port access to funding, the U.S. decision to support public port investment shows recognition of the role of ports as generators of economic activity and facilitators of trade. Such recognition has arguably been lacking in Canadian transportation policy, notwithstanding the designation of CPAs as the National Ports System.

The Panel believes that U.S. government expenditures on marine infrastructure do, in the longer term, represent a competitive threat to Canada's largest ports. About half of all U.S. ports receive some form of funding assistance, while others have the ability to levy a municipal tax on local citizens to fund port improvements. Still others can use revenues generated from non-port activities. The Panel suggests that the government should continually scrutinize the performance of Canadian ports relative to U.S. competitors and be prepared to take policy action if U.S. government funding seriously distorts competitive traffic patterns.

Issues and Concerns about the St. Lawrence Seaway

Participants in the Panel's consultations generally approved of commercialization arrangements for the Seaway. Although Seaway traffic declined in both 1999 and 2000 and vessel transits fell, business plan expenditure targets were met, and a rebate against the scheduled toll increase was announced. An economic downturn in the United States, coupled with increasing tariff action by Canadian and U.S. governments on imported steel, suggests that reduced levels of shipping activity and vessel transits can be anticipated in the short term. The Seaway might therefore face difficulties in revenue generation.

At the same time, the St. Lawrence Seaway Management Corporation's forecast for funding required for asset renewal is $126 million for the five years 1998–2003, an average of $25 million annually. The Corporation's plans call for this to be met from revenues, with no call on government assistance.

To encourage increased use of the waterway, the SLMC, together with other prominent marine operators and interested parties, has undertaken or joined in several initiatives, including the Waterway Strategic Issues Forum, involving Canadian and U.S. interests, and A 20/20 Vision for the Future, whose twelve recommendations are aimed at enhancing the competitive future of the waterway and restoring the Seaway's attractiveness for grain and other commodities.

The Panel was encouraged to learn that the revenues allocated to asset renewal are expected to be sufficient to retain the current capacity of the Seaway, given the Seaway's importance in trade and economic development. The generally positive results of the commercialization initiative to date were noted.

Domestic Shipping Sector

Much of Canada's domestic shipping activity is concentrated in the Great Lakes and St. Lawrence waterway, where marine operations are conducted largely by vessels owned and operated by the nine member companies of the Canadian Shipowners Association. In 1999 these firms operated some 87 vessels — a mix of bulk carriers, self-unloaders and tankers — that together carried 73.9 million tonnes of cargo. A decade earlier, 124 vessels carried 77.3 million tonnes. Total domestic cargo handled by marine carriers in 1999 was 105.8 million tonnes, a modest increase from the previous year.

Domestic marine traffic serves several established traffic flows. Movements of bulk commodities — coal, grain, stone, iron ore, forest products and minor bulks — continue to dominate domestic shipping, particularly in the Great Lakes-St. Lawrence. In Atlantic Canada, shipments of gypsum and forest products have been relatively consistent, but on the west coast, the tug and barge industry, strongly associated with the forest products/lumber sector, has seen contractions. In the east, there are containerized freight operations between Montreal, Halifax and Newfoundland and burgeoning supply activities to offshore explorations.

Canada-U.S. marine trade is conducted by either U.S. or Canadian domestic carriers with operations centred mainly in the Great Lakes-Seaway system, although some transborder marine trade is conducted on both the Atlantic and Pacific coasts. In 1999 waterborne transborder trade amounted to some 91.9 million tonnes.

The Coasting Trade Act

The *Coasting Trade Act* prohibits foreign or non-duty paid ships from engaging in coasting trade unless it can be demonstrated that no Canadian vessel was available for the specific activity. This means that domestic marine commerce is restricted to Canadian registered vessels, owned and operated by Canadian domiciled companies and using Canadian crews. Vessels must either be built in Canada or, if built abroad, have paid a 25% import duty on the full vessel price.

Issues and Concerns in the Domestic Shipping Sector

Participants from the marine and port communities identified the current state of marine infrastructure as a source of concern. Commercialization of marine entities and divestiture of public ports and properties have led to concerns about infrastructure maintenance and replacement costs, particularly in Atlantic Canada and on the Great Lakes waterway. Participants also cited Seaway maintenance and dredging of access channels in the Atlantic, St. Lawrence and Pacific regions and on the Mackenzie as areas of concern. In the North, a particular additional concern is that official marine charts remain imprecise or incomplete.

Despite some fairly strong years between 1995 and 2000, Canada's marine sector faces several imminent challenges. They include traffic volatility, because of its susceptibility to changes in economic activity in key sectors and markets; rising fuel costs and lower water levels in the Great Lakes and St. Lawrence, necessitating lighter loading of vessels; the continuing move toward larger vessels that cannot enter the Seaway (now some 80% of world shipping); and reduced grain exports, particularly eastbound — a trend that is forecast to continue well into the decade.

Industry participants identified two competitive threats to the domestic shipping sector:

- First, increased competition from U.S. ports and routes for container cargo (and increasingly Canadian bulk exports), assisted by large public investment in U.S. marine infrastructure.

In view of forecasts of continued growth in foreign trade, much of which will be containerized, and the increasing size of the container vessels themselves, demands on marine infrastructure capacities can also be expected to multiply.

- Second, some in the marine transport industry in the Great Lakes-Seaway believe the competition they face in their traditional traffic of export grain is unfair for several reasons, including government policies they interpret as favouring the route through Churchill, rail carriers' rate policies, and the use of government-supplied grain cars for all-rail services to eastern ports.

Although the number of vessels in the Canadian lake fleet has continued to decline slowly, the level of traffic carried by the domestic fleet has remained relatively stable. Interveners nevertheless expressed serious concern about the domestic bulker fleet, the capacity of which has fallen by 35% since 1988, the remaining vessels finding only partial utilization each season. The average age of the fleet, particularly the bulkers, is over 27 years (compared to a world average for bulk vessels of 14 years), and decisions on replacement are pressing. But any future guarantee of employment and earnings is questionable. The industry preference to date has been to convert bulkers to more employment-flexible self-unloaders; bulker replacement costs for vessels built in Canada are considered prohibitive.

The Canadian shipbuilding industry continues to suffer a decline in business. Many shipowners now find it significantly cheaper to have ships built abroad, even after the 25% import duty is factored in. Vessel refitting and repair now constitute the core business of Canadian shipyards. The National Partnership Project Committee recently reported to the Minister of Industry with proposed solutions to these issues. The report ruled out direct subsidies and declared the 25% duty ineffective, but proposed other forms of assistance. It also urged the government to pressure the United States to amend its legislation (known as the Jones Act), thus allowing U.S. vessels to be built and repaired in Canada.[2]

International Shipping Sector

In international commerce, Canada is served by a large number of foreign shipping services as well as Canadian companies operating foreign flag vessels. In 1999 this commerce amounted to 280.7 million tonnes, of which 64% was for export.

Canada continues to be a principal supplier of raw materials in the form of bulk shipments of coal, grain, sulphur, potash, iron ore and forest products. Primary markets include the United States and Japan, followed by other Asian nations. This overseas trade has exhibited continuing uncertainty of demand since 1997, coupled with relatively low commodity prices, but it began to show some increase by the end of 1999. Imports using the marine mode include petroleum products and consumer goods.

Economic slowdown in the United States, Canada's principal trading partner, and continuing weakness in Japan, the second largest partner, illustrates the volatility that characterizes marine trade and can be expected to continue.

Significant growth in international trade in consumer and industrial goods has been responsible for consistent increases in international containerized cargo. Chief beneficiaries of this business have been the ports of Vancouver, Halifax and Montreal. At one time all were seen as major bulk export ports, but now all are strongly associated with container cargo traffic. Total container throughput for the three ports in 1999 was 2.4 million twenty-foot equivalent units, compared to 1.2 million a decade earlier, and forecasts indicate further growth.

Technology and infrastructure improvements in the past five years have spurred the use of Canadian intermodal routings through both Atlantic and Pacific gateways, while the St. Lawrence remains a popular route for U.S. midwest container cargo.

The Shipping Conferences Exemption Act, 1987

Much of the container cargo now routed through Canadian gateways is handled by shipping lines that belong to one or more 'shipping conferences'

— voluntary associations of carriers on a particular trade route that participate in service agreements, including the capacity to be provided and rates to be charged.

The *Shipping Conferences Exemption Act, 1987* (SCEA) exempts certain practices of shipping conferences from the *Competition Act*, including agreements on common prices and sharing of capacity. SCEA was first enacted in 1970 and has been renewed periodically thereafter; in the spring of 2001, Parliament was considering amendments to SCEA. The government introduced the amendments following a Transport Canada consultation paper in 1999. The amendments are intended to streamline SCEA while maintaining a harmonized position with Canada's principal trading partners, notably the United States, where the equivalent legislation — the Ocean Shipping Reform Act — was renewed in 1999.

Some observers believe that the influence of conferences is diminishing, as changes in the nature of the shipping business and greater sophistication on the part of the shippers have encouraged more negotiations. Conference shipping lines have increasingly agreed to lower rates with shippers outside the conferences. Adoption of electronic business will also continue to erode the influence of conferences.

Issues and Concerns in the International Shipping Sector

Internationally, the trend is to ever larger container vessels and concentration of trans-ocean shipping services, featuring fewer large carriers operating in alliances or consortia and serving fewer ports. Opportunities for feeder services and niche operations nevertheless remain significant. Most world shipping routes continue to demonstrate severe over-capacity, causing rate restraint, while new shipbuilding will likely only exacerbate this trend. Adoption of e-business in international shipping can be expected to lead to further concentration as smaller lines are driven out of the market.

The shift in container trade structure and reduced tolerance for congestion and delay are putting pressure on ports, in terms of requirements for both landside efficiencies in container handling and onward movement and physical infrastructure and equipment.

The coming of larger vessels raises the issue of natural deep water availability, a consideration that would seem to favour Atlantic Canada ports over U.S. ports. Likewise, recent investments in state-of-the-art terminal operations, with congestion-free inland access and egress, confer competitive advantages.

Finally, a choice of continental gateways, particularly in the Pacific via the Northwest Corridor using under-used rail and port capacities, seems to augur well for the efficiency and competitiveness of the Canadian national system.

Container shipping is of growing importance, particularly to Montreal, where Canadian Pacific Railway and sister companies involved in terminal operations and shipping have forged a successful intermodal chain that moves large numbers of U.S. containers through the port. The port of Halifax, working with Canadian National, has now opened a second Atlantic gateway to the U.S. midwest. In both cases, efficiency in operations and modern, streamlined facilities, coupled with a lower dollar, cheaper costs and a U.S. legislative deterrent (a harbour maintenance tax) have combined to favour the Canadian routes. Recent draught problems in the St. Lawrence and an aggressive marketing and infrastructure program in the U.S. east coast ports, particularly New York, have reduced the Montreal advantage somewhat, although volumes continue to grow.

Issues and Concerns about the Shipping Conferences Exemption Act

Carriers and ports largely support the policy of continuing the exemption for liner conferences under SCEA and oppose introduction of a sunset clause. Although shipping conferences' share of international liner traffic has been declining steadily for a decade, they argued that introducing such a clause would represent a significant divergence from U.S. policy. It was also argued, however, that eliminating the exemption for collective pricing would have far less impact on carriers than would have been the case when SCEA was first enacted.

Critics of current Canadian policy, including growing numbers of shippers, complain that SCEA constrains competition among members and limits the influence of competition from non-members. Although shippers acknowledge the decline of conference power, some remain concerned about shipping line use of 'discussion agreements'. These can include both conference and non-conference lines and are aimed at stabilizing trade by various means, including the non-marketing of capacity, slot sharing, and space chartering. When filed in Canada, these agreements are regarded as conference agreements and therefore have SCEA protection.

Some shippers argued that Canada should take an international leadership role in moving toward eventual elimination of protections by including a sunset clause in SCEA. The carriers, who oppose such a clause, say it would place them in a different regulatory environment than competitors in the

United States and could lead to withdrawals of service at Canadian ports. While experts consider this outcome unlikely — especially given the significant volume of U.S. cargo now routed through Canada, all of which is non-conference — the Panel acknowledges the potential risk to Canadian ports and shipping activity.

In seeking greater competition in international shipping, larger-volume shippers now see ocean carriers as integral partners in their global supply chains and therefore favour a less regulated environment, where negotiated confidential service contracts replace transaction-based rate and service offerings. Interveners pointed to the large number of such contracts signed in the U.S. following the Ocean Shipping Reform Act of 1999.

In addition, they argue for including an explicit, obligatory confidentiality requirement for any service contract negotiated between a shipper and a carrier. Such a provision would go well beyond the U.S. legislation, which permits confidentiality provisions in service contracts to be negotiated between the contracting parties.

Considerations and Recommendations

Marine Services

Marine navigation and ice-breaking services are the responsibility of the Canadian Coast Guard, under the authority of the Minister of Fisheries and Oceans and therefore beyond the Panel's main focus. The Panel did no specific research on these services but is aware of the continuing debate between government providers and marine industry users about the extent and cost of services, the proportion of costs that should be assigned to non-commercial objectives, the allocation of costs among users, and the fees charged to them. The Panel is also aware that the issues are being analyzed in a study commissioned by the Treasury Board Secretariat. Nevertheless, the Panel believes it is appropriate to make the following observations and recommendations.

An integrated transportation policy requires consistency of treatment of all modes and users, so far as practical. The Panel accepts that efficiency and equity are normally both served best when users pay the full cost of services provided to them by government. The continuing substantial subsidies for marine services are an anomaly in national transportation policy. They stand in stark contrast to air navigation services — probably the closest comparison that can be made — where the policies of the last decade have achieved complete cost recovery from users.

The Panel acknowledges that rapid growth in air traffic contributed to the success of this policy. Equal treatment of the modes remains desirable nonetheless. The Panel also recognizes that policy must take account of the extent to which marine services are provided at no charge to users of competing facilities in other countries — notably the United States. Negotiations on harmonized actions might then be essential. But the eventual goal should be full recovery of costs occasioned by users.

> **Recommendation 8.1**
> **The Panel recommends that full recovery of the costs of marine services attributable to users be pursued as a long-term goal.**

The other aspect of efficiency to be sought from transport policy is that only services that are needed should be provided, and their cost should be minimized. Recent policy has sought a better match between services and needs and better cost control through commercialization, with involvement of users in decisions on spending and charges. Again, marine navigation and ice-breaking services are an anomaly, as they continue to be provided almost exclusively by the Coast Guard. Some aspects of the services undoubtedly require government delivery — asserting national sovereignty, for example. But again, the new approach to providing air navigation services shows that policy innovation is possible.

Services directed to commercial and private transport could be distinguished and commercialized, for example, and possibly even sold to a 'corporatized' agency like NAV Canada. Alternatively, less sweeping injections of market competition could no doubt achieve cost savings, through tendering for services for example. Users could also become more involved in decisions, at the very least through transparency of costs and tendering processes.

> **Recommendation 8.2**
> **The Panel recommends that opportunities to commercialize marine services be sought.**

The Panel believes that the other concerns about marine infrastructure — ports and the Seaway — can be dealt with through governance processes. Our recommendations therefore appear in the next chapter, in our discussion of governance of the newly commercialized infrastructure providers.

With regard to competition in marine transportation, the Panel offers the following assessment and recommendations. These are consistent with our objective of an integrated intermodal strategy.

The Shipping Conferences Exemption Act, 1987

The Panel recognizes that shipping conferences are likely to continue to lose influence as increasing amounts of traffic are carried under independent contracts or by non-conference carriers. Nevertheless, the Panel favours removing artificial barriers to competition, as the guarantee of cost efficiency among carriers and of service and price to users. In principle, therefore, the Panel favours eliminating the exemptions provided by SCEA. As with the international aviation regulatory regime, however, the Panel recognizes the extent of commitment among trading partners to the existing conditions and acknowledges that unilateral action is not likely to provoke any general relaxation.

> **Recommendation 8.3**
> **The Panel recommends that the government make clear its commitment to eventual elimination of the liner conference exemptions from competition law and that it actively pursue multilateral agreement among international partners to do so.**

The Coasting Trade Act

Similarly, the Panel believes that the restrictions in the *Coasting Trade Act* should be eliminated, at least for North American carriers, to encourage cost-efficiency among carriers and thereby benefit users. We recognize, however, that the United States shows no signs of removing similar restrictions in its legislation.

> **Recommendation 8.4**
> **The Panel recommends that the government make clear to the government of the United States its preference for eliminating the restrictions on entry to domestic shipping in the *Coasting Trade Act* and offer to negotiate bilateral elimination of equivalent restrictions.**

The *Coasting Trade Act* also imposes a 25% duty designed originally to protect Canadian shipbuilding. The measure now amounts to an impediment to efficiency for Canadian carriers, however, distorting competition between domestic shipping and other freight modes and impeding acquisition of specialized vessels needed for certain trades (notably Arctic re-supply and development). The Panel believes that aid to shipbuilding companies — if this is to be government policy — should be provided directly to them.

Recommendation 8.5
The Panel recommends that the 25% duty on vessels built or purchased outside Canada be eliminated.

Notes

[1] Under the Coast Guard's fee policy, announced in 1998, out of total marine navigation services costs of $251 million in 1997, $87 million was allocated to industry, and the target for cost recovery was set for three years at $28.1 million. In 1999–2000, actual recovery was $26.7 million, or 31% of the amount allocated to industry. Of total ice-breaking costs of $163 million, $61 million for services north of 60 was exempted from cost recovery; of the remaining $102 million, $76 million was allocated to industry, with the cost-recovery target set for three years at $6.9 million. In 1999–2000, actual recovery was $5.2 million, or 7% of the amount allocated to industry.

[2] The Merchant Marine Act of 1920 is commonly known as the Jones Act.

Chapter 9
Governance of the Newly Commercialized Infrastructure Providers

Institutional arrangements to introduce a more commercially oriented approach to managing air and marine infrastructure are among the most important transportation developments of the last decade. Managing Canada's major ports and airports, the air navigation system, and the Canadian-administered portion of the St. Lawrence Seaway — historically the task of the federal government — is now the responsibility of independent not-for-profit corporations.

Change was driven in part by evidence of limitations and inefficiencies of government operation and in part by pressure to control deficits and reduce public debt. Adopting user-pay principles — a feature of most commercialized transportation facilities — has supported efforts to improve government finances and operational performance. In the airport sector, an important factor internationally was the need for organizational arrangements to satisfy the sector's growing investment requirements. The number of airline passengers has been growing at about double the rate of world economic growth and cargo traffic at triple the pace. Governments — under pressure through the 1980s and '90s to limit borrowing and control public sector growth — had to find ways to facilitate needed expansion of infrastructure.[1]

Air and marine infrastructure providers operate facilities that are essential to an effective transportation system. There is a public interest in providing these services efficiently, safely and in an environmentally responsible way. Infrastructure organizations must be able to generate revenue for new investment. At the same time, there is a need to ensure that organizations do not abuse market power where users have no other — or only very imperfect — options.

The new infrastructure providers are non-share corporations that cannot raise equity capital and must rely on fees and debt to finance their activities. Not-for-profit corporations can accumulate surpluses from their operations, but they are not allowed to distribute these revenues to their members; all surplus funds must be reinvested in the corporation. The government has attempted to give the new entities the means to achieve financial self-sufficiency and to give interested parties, including users and community groups, opportunities for input on their decisions.

Beyond these similarities, there are substantial differences in the governance regimes for these entities. The variations respond in part to differences in the tasks they face. They also reflect improvements over time in the government's understanding of how to create an appropriate governance structure.

The New Institutional Arrangements

Airports

At the end of 2000, 247 airports offered scheduled passenger service, but more than 90% of all commercial traffic was handled by the country's 26 largest airports, which make up the National Airports System (NAS). By the end of 2000, all but three of the NAS airports had been transferred to airport authorities, as part of the broader commercialization program. Before adoption of the National Airports Policy in 1994, Transport Canada owned, operated or subsidized 149 airports. The government will soon have completed the transfer of almost all facilities, except for a small number of remote airports that serve isolated communities and require continued subsidization.

The current approach was developed to replace an ill-defined and ad hoc system of airport management. The government had exercised its responsibilities for more than 60 years with "no statutory, regulatory or policy framework that defines a clear role for the federal government in the operation of airports".[2] Airport performance was undermined by several factors, including a large centralized administration and restrictive labour agreements that increased airports' labour requirements.[3] With local control, the expectation was that airports would operate in a commercial and cost-effective manner and be more responsive to local needs. The transfer was also aimed at facilitating investment and relieving the airports of government financial constraints.

The NAS airports forming the core of the system include those located in national, provincial and territorial capitals, along with airports that handle at least 200,000 passengers a year for three consecutive years. The three busiest airports — Toronto (Pearson), Vancouver and Montreal — account for more than 60% of traffic. Pearson alone handles almost a third of the country's passenger traffic.

The new approach was outlined in a 1987 policy statement, *A Future Framework for the Management of Airports in Canada*, but actual transfer of NAS airports began in 1992 when the government entered into agreements with Local Airport Authorities (LAAs) in Montreal (Dorval and Mirabel), Vancouver, Calgary and Edmonton. A second round of transfers occurred after the government developed the principles and guidelines of the National Airports Policy. Pearson, which was transferred in 1996, and the other NAS airports that subsequently became Canadian Airport Authorities (CAAs) were required to adhere to a slightly expanded set of accountability requirements (as compared to LAAs) and were expected to achieve self-sufficiency within five years.

The government remains the owner of NAS airports, but operational responsibility rests with the authorities. Sixty-year lease arrangements (including a 20-year renewal option) specify the rent the government is entitled to receive from each airport authority. These revenues are not earmarked for use in the airport system. The government continues to be responsible for regulating all aspects of aviation safety and security. In addition, the National Airports Policy acknowledges the government's continued responsibility for the integrity and viability of the NAS as a whole.

Both LAAs and CAAs are guided by boards of directors that include representation from local business and community interests. Both are required to make certain documents available to the public and hold public meetings; allow Transport Canada, at any time, to audit financial records and procedures to ensure compliance with the ground lease; and allow an independent performance review every five years. The CAA governance regime imposes some additional requirements:

- The board must have a specified composition that includes two or more federal nominees; one provincial nominee; one representative each from the business community, organized labour and consumer interests; and a majority of directors nominated by the local/regional government.
- While charges are not subject to review, CAAs must provide 60 days' notice of price increases and provide justification for these increases in their media notices.
- Along with an annual public meeting, CAAs must meet twice a year with a Community Consultative Committee that includes aviation industry representatives.

- CAAs must provide more public information, including information on the remuneration of directors and the salary ranges of senior officers.
- All contracts in excess of $75,000 must normally be opened to competitive tendering.

The federal government has just completed a major lease review of the LAAs. The review identified performance improvements that have resulted from eliminating government constraints and establishing more entrepreneurial organizations.[4] It found in particular that LAAs have improved the quality of airport services and been more proactive and responsive than Transport Canada in meeting the demand for new airport facilities.

Weaknesses in governance and control arrangements were also identified, however, that could lead to unsatisfactory future performance. For example, the market power of LAAs was underestimated, and checks and balances have not operated as expected. Financial institutions have not been a significant source of discipline because, with the ability of LAAs to raise revenue to cover their loans, lenders have faced little risk. Consultations with users and other interested parties and the accountability of directors to nominating bodies have also been of limited effectiveness as disciplinary mechanisms.

The more demanding accountability requirements for CAAs address only some of the concerns identified in the LAA review. With CAAs, a concern remains that airports can use their market power to generate more revenue than they can use efficiently. A particular focus of attention is airport improvement fees (AIFs), imposed to help fund capital projects. In 1999, AIFs accounted for more than 20% of revenues at the Calgary, Edmonton and Winnipeg airports and more than 30% at Vancouver. AIFs can help airports build a base of retained earnings and thereby improve their ability to obtain financing for major capital projects. Since passengers are largely captive, however, AIFs provide an attractive revenue source, which can be used for any purpose. All NAS airports have either introduced AIFs or are in the process of doing so. At Toronto, they are now being imposed not only on departing but also on connecting passengers.

Another concern identified in the LAA review is the capacity of airport authorities to create for-profit subsidiaries. Subsidiaries give rise to several concerns: they might divert management and board attention from airport to non-airport activities; they create new economic risks for the airport authority; and they raise the possibility that revenue from the airport's core activities will be used to subsidize competitive business activities. Similar concerns apply to CAAs that engage in ancillary activities.

A further limitation of existing arrangements — and one that applies both to LAAs and CAAs — is that the ground lease is the vehicle for stipulating some important accountability requirements. They include requirements under the law applicable to for-profit corporations but not addressed adequately in Part II of the *Canada Corporations Act*, the part that applies to not-for-profits. The ground lease is a poor substitute, however; since the lease cannot realistically be terminated in the event of non-compliance, the government has no effective recourse if an airport fails to implement an adequate code of conduct for directors and officers or to satisfy other governance requirements.

Air Navigation

The air navigation system consists of services that facilitate the operation of aircraft within Canada (and some adjacent oceanic air space) and satisfy Canada's obligations under Article 28 of the Chicago Convention to facilitate international air travel. Services include flight information, air traffic control, navigation and landing services, airport advisories, and aviation weather information. In 1996, the government transferred all its operational responsibilities for air navigation (with the exception of services provided by the Department of National Defence at military facilities) to NAV Canada. NAV Canada is self-financing, deriving its revenue from user charges introduced at the end of 1998 to replace the air transportation tax.

Commercializing air navigation was aimed at creating an organization that was more efficient and responsive to user needs. In 1991, the Air Transport Association of Canada, the Canadian Airline Pilots Association, the Canadian Air Traffic Association, and the Canadian Business Aircraft Association voiced concerns about operation of the air traffic control system, arguing that "stress on the system would be reduced in an environment where the managers had greater operational freedom and access to revenue that allowed them to respond to changing requirements".[5] It was believed that an independent organization, free of government rules and financial constraints, could more easily close unnecessary facilities and make the substantial capital expenditures needed to modernize the navigation system.

Unlike the airport authorities, which lease their facilities, NAV Canada owns its assets. As part of the agreement, NAV Canada purchased the government's assets — control centres, control towers, flight service centres, software, and intellectual property — for $1.5 billion. As with the airports, however, the government remains responsible for regulating safety and security. Upon commercialization, new safety regulations were put in place (Part VIII of the *Canadian Aviation Regulations*), and Transport Canada established the needed monitoring and enforcement capability. Under these regulations, the Minister can disallow material changes in air navigation services that could adversely affect safety.

NAV Canada is governed by a 15-member board of directors, 5 of whom are nominated by the aviation industry (4 by the Air Transport Association and 1 by non-commercial users), 2 by the labour unions, and 3 by the federal government. The remaining positions are held by NAV Canada's CEO and four independent members chosen by the board. The board receives advice from an 18-member Advisory Committee, composed of a broad cross-section of aviation professionals. NAV Canada's board is an important mechanism for balancing user, employee and public interests while giving expression to their shared commitment to NAV Canada's overall success.

In addition to the checks and balances arising from board representation structure and government oversight of safety and security, NAV Canada is subject to specific legislative provisions governing services and user charges. Although NAV Canada does not require approval to implement service changes, it must give interested parties at least 60 days' notice of planned material changes and an opportunity to comment. In the case of designated northern and remote services, proposed service changes can be blocked by affected provincial or territorial governments or by users representing at least a third of the relevant revenues, with the concurrence of the Minister of Transport.[6]

NAV Canada's user charges must adhere to principles intended to promote fairness, including the following:

- Charges cannot differentiate between domestic and international flights or between domestic and international carriers.
- There must be separate charges for en route and terminal services, reflecting a reasonable allocation of costs between these services.
- Charges for recreational and private aircraft must not be unreasonable or undue.
- Charges for designated northern or remote services must not be greater than for services elsewhere in Canada.

- Charges must be consistent with Canada's international obligations.
- Charges must not raise greater revenues than required to meet NAV Canada's current and future financial requirements in relation to providing civil air navigation services.

NAV Canada's methodology for establishing charges must be transparent. Users must have at least 60 days' notice of intention to revise a charge, and if they believe that NAV Canada did not adhere to the charging principles, they can file an appeal with the Canadian Transportation Agency.

Since its establishment, NAV Canada has implemented significant operational changes. By streamlining corporate functions, reducing management layers, and hubbing maintenance operations, the organization has achieved significant cost savings. The organization has taken steps to ensure a high level of safety and implemented an investment strategy to ensure that it is among the most technologically advanced air navigation services in the world.

Several countries have established autonomous state-owned authorities to operate their systems, and the UK is transforming its aviation authority into a public/private partnership, but Canada is the only country to privatize its air navigation system.[7] The Canadian model is a promising alternative. There is scope for debate about how well various interests are represented through existing mechanisms, but the governance structure does provide an opportunity for balancing the perspectives of interested groups in the context of directors' legal obligation to give primary attention to the interests of the corporation.[8]

Ports

As discussed in Chapter 8, the *Canada Marine Act* of 1998 provided the basis for restructuring Canadian ports, introducing commercial principles in port management, and allowing for input from users and the community where a port is located. As with airports, the government identified a core group of facilities that stand out because of their importance and their perceived ability to be self-sufficient. Other ports under Transport Canada administration have been designated as regional/local and are being transferred to other governments, community organizations or private interests. As of December 31, 2000, Transport Canada had transferred, deproclaimed, closed, or terminated its interest in 382 of the 542 port facilities under its control. Of the remaining facilities, 34 are remote ports serving isolated communities.

Canada Port Authorities (CPAs) are free to set port fees at levels needed to cover their costs, although they must give notice of new or revised fees and allow representations on proposed revisions. Port authorities can raise revenues by forming wholly owned subsidiaries to engage in ancillary activities. Permitted activities are described in the letters patent, generally in broad terms.

CPAs are agents of the Crown when they engage in port activities, but subject to special modifying requirements of the *Canada Marine Act*. They are required to submit a five-year business plan to the Minister annually, but for information purposes, not for approval. A more serious constraint is the borrowing limits set in CPAs' letters patent, which several participants in the Panel's consultations said are affecting investment and reducing the CPAs' ability to compete with U.S. ports.

Notwithstanding these concerns, the CPAs are subject to a reasonably well developed system of accountability and control.[9] Compared to airport authorities, CPAs have less scope for exercising market power, making it easier to monitor corporate performance. In addition, CPAs must adhere to detailed governance provisions in the *Canada Marine Act*, their letters patent, and the *Port Authorities Management Regulations*. These reporting and accountability requirements go beyond those imposed on airport authorities:

- They give attention to the qualifications, duties and liabilities of directors.
- They specify that fees must be fair, reasonable and non-discriminatory among users and offer complainants the right to appeal to the Canadian Transportation Agency about unjust discrimination.
- They provide not only for a special examination of CPAs' books, records, systems and practices, but also a risk assessment at least once every five years.
- They impose an obligation on CPAs to develop detailed land use plans for the property they manage that citizens can examine and comment on.

St. Lawrence Seaway

The St. Lawrence Seaway serves 15 international ports and some 50 regional ports in Canada and the United States. The Seaway has two major sections: the Montreal-Lake Ontario section, and the Welland Canal, linking Lake Ontario and Lake Erie. In the 2000 season, combined traffic on the two portions totalled 46.5 million tonnes.

Canada and the United States share management of the Seaway. The government transferred management and operations of the Canadian portion of the Seaway to a private-sector management group in October 1998. The St. Lawrence Seaway Management Corporation (SLMC) is a not-for-profit corporation made up mainly of members representing the facility's major users — domestic carriers, international carriers, grain companies, steel and iron ore companies and others. As a not-for-profit entity, the SLMC cannot distribute profits to its members; the role of members is to appoint the corporation's directors and participate in annual and special meetings.

The SLMC recovers its cost from tolls. The organization does not pay rent to the government, but it must generate sufficient revenue to cover its operating expenses and maintain the infrastructure. The SLMC's commercialization agreement with Transport Canada includes several special provisions:

- A five-year business plan establishes specific performance targets related to operations and asset renewal.
- The organization must invest $126 million in infrastructure maintenance and capital in its first five years of operation.
- Seaway tolls must increase by a minimum of 2% per year over the first three years. The rate of increase can be lowered to 0.5% in years 4 and 5 if SLMC has met its targets and funded a notional reserve.

Seaway users, who had been concerned about rising toll rates when the waterway was under government management, can now exercise some influence over operating costs and charges. At the same time, government can ensure that costs are not being reduced by running down the publicly owned assets under the corporation's management.

Several mechanisms contribute to a high degree of accountability and control. The letters patent and by-laws provide a significant oversight role for members and committees of the board. Annual reports and other documents, including a three-year strategic plan, provide information on corporate activities, objectives, and achievements, and the remuneration of directors and officers. There is a statutory requirement for a special examination of the organization's records, practices and control systems at least once every five years. In addition, the Minister can inquire into reasons for changes in SLMC's financial position and require that special measures be introduced to cut costs or increase efficiency.

It is too early to assess SLMC's performance, but it is clear that the organization has been structured carefully.[10] Its governance structure provides a high degree of transparency and corporate accountability. The new arrangements introduce incentives for improved operating efficiency that were lacking under government administration, while allowing the government to ensure the Seaway's fixed assets are managed appropriately.

Considerations and Recommendations

Commercializing air and marine infrastructure has generated important benefits. It has facilitated needed new investment, allowed exploitation of new commercial opportunities, and generated enhanced service delivery that is more responsive to customer needs. There are some gaps and weaknesses, however, in current institutional arrangements. Studies undertaken for the review of Local Airport Authorities identified deficiencies in governance and control. In submissions to the Panel, concerns were raised about aspects of the performance of Canadian Airport Authorities. Air Canada, for example, argued that airport authorities are "monopolies in their own right and are exercising extensive authority and control over the activities in their domain."[11]

In the case of marine infrastructure, the Panel heard concerns particularly about restrictions in the letters patent of the Canada Port Authorities. Some interveners fear that, with their established borrowing limits, Canadian container ports will not be able to upgrade their facilities to face increasing competition from U.S. ports.

More generally, questions have been raised by interested parties and others, including the Auditor General, about the financial arrangements between the government and infrastructure providers. Ideally, the approach to determining rental payments for the use of Crown assets would be consistent across modes and take account of the importance of exposing users to the true costs of the resources used to produce infrastructure services.[12]

Canada is not alone in introducing major changes in transportation infrastructure management. The past two decades have seen such change around the world as governments respond to pressures to control deficits, limit borrowing and improve efficiency. Canada's approach is unique, however, and the Panel believes there has been far too little discussion of whether the not-for-profit model is the optimal approach. Would it be preferable, for example, to move to full privatization of airports, as in the UK, or to private sector airport operation with continuing federal land ownership, as in Australia? Although existing commitments and long-term contractual arrangements make it difficult to change course, policy should be guided by a sound long-term vision. Along with these issues, the following discussion focuses on the more immediate reforms needed to address weaknesses in the governance regimes for air and marine infrastructure.

Setting a Future Policy Direction

Evidence from experiments with infrastructure models around the world is inconclusive. Based on experience across sectors, however, most economists agree that the private for-profit model has important advantages over the alternatives of public production and not-for-profit production in the case of purely commercial services. In for-profit corporations, ultimate authority resides with those who bear the consequences of corporate decisions — the shareholders — and several well developed legal and market mechanisms encourage corporate directors and managers to run the corporation in shareholders' interests. Legal controls include codified standards for directors' loyalty and duty and shareholders' right to sue directors and officers. An important source of market control is the equity market, which offers both an evaluation of managerial performance and a mechanism shareholders or outside investors can use to change the corporation's management and direction.

For-profit corporations are not immune to problems with accountability and control, but legal and market instruments generate strong pressures for efficient performance — generally exceeding those that exist under public and not-for-profit production. In the current context, the question is whether providers of air and marine infrastructure services are sufficiently different from providers of other commercial services that they warrant a special organizational form and unique governance structure.

In the Panel's view **the differences are not sufficient to rule out the for-profit model for some forms of air and marine infrastructure**. A for-profit organization is a potentially attractive alternative at airports and ports that are financially viable — in other words, at most NAS airports and Canada Port Authorities. Two broad factors need careful consideration.

- First, there is a need to ensure that, under a for-profit structure, significant public policy objectives would continue to be addressed.

This should not be a problem in principle, since the public policy requirements associated with port and airport operation can be specified through laws and regulations; they do not require distinct organizational and governance arrangements. Safety, for example, has been and will continue to be an important government responsibility, but it is a function that can be performed whether the organizations are for-profit or not-for-profit. The Panel believes some additional controls are needed to ensure independent carriers have access to airport facilities, but again, this issue can be addressed through regulations and is not affected by for-profit or not-for-profit status.

In some cases, however, the government may need to identify public interest objectives more clearly. For example, major airport and port authorities are required to consult the community and take account of community interests in land planning and development decisions. With a for-profit model, opportunities for direct community involvement would be fewer. Further thought should be given to whether new controls would be needed to ensure adequate attention to community concerns.

- Second, there is a need to address concerns about the potential market power of for-profit infrastructure providers.

In the case of ports, these concerns are minimal because of the nature of the marine services market and the extent of competition among ports. Airports, however, would be in a position to raise some of their charges above competitive levels, although at smaller NAS facilities such mark-ups would contribute mainly to helping the airport achieve cost recovery. Responding to concerns in this area requires taking account of the costs of government intervention. Price and profit regulation generally entails significant costs. In addition to the cost of the regulatory process itself, experience suggests that operating controls inevitably distort firms' incentives and result in some loss of economic efficiency.[13]

At the same time, in unregulated for-profit airports, differential pricing systems using size- or weight-related fees might effectively minimize the efficiency losses created by non-competitive charges. Government would have to target areas where the market power of for-profit facility providers gave rise to substantive concerns and develop low-cost mechanisms to address potential problems.

If these issues can be resolved successfully, transformation of NAS airports and CPAs into for-profit entities would likely yield substantial benefits. For-profit infrastructure providers would have strong incentives to minimize costs and deliver high-quality services that respond to customer needs. There would be little incentive for over-investment or 'gold-plating' of facilities. Privatization would lead to a once-and-for-all determination of appropriate compensation for the government's past investments and bring an end to contractual disputes over lease arrangements. Privatization would also facilitate a much needed rationalization of airport and port infrastructure.

Privatizing major ports and airports would require time and careful planning. Attention would be needed to minimizing the cost of terminating and/or renegotiating contractual arrangements between infrastructure providers and their customers, suppliers and bankers. The regulatory framework for the new private operators would need to be set out clearly. Restrictions on share ownership, if any, would need to be established. In the case of the largest entities, several offerings would probably be needed, with the initial sale serving both to test the market and to help the government determine a fair market value.

In the 1990s, Canada made an important start in commercializing its air and marine infrastructure. It may now be time to consider developing a long-term strategy to realize the full benefits of market-oriented service provision. It was not possible to address all the issues surrounding privatization in the course of the Panel's review. Based on a preliminary assessment, however, the Panel believes that this is a potentially promising policy direction that could result in more efficient provision of infrastructure services.

In the meantime, the Panel considered how the operation of the existing not-for-profit agencies might be improved.

Strengthening Accountability and Control

In developing proposals to improve accountability and control, the Panel was guided by the following considerations:

- **Corporate governance guidelines for private for-profit corporations provide a useful starting point in thinking about appropriate practices in the not-for-profit sector.** They emphasize several important themes, including the need to choose directors for their skills and competence; the requirement that boards have access to needed information and outside advice; and the importance of maintaining a high degree of transparency through disclosure of information.[14]

- **Additional mechanisms may be needed to compensate for the lack of some market controls (notably, the absence of an equity market) and to take account of the additional monitoring and control problems that arise where infrastructure providers have significant market power.** Transparency and a vigilant board are all the more important as controls in the not-for-profit sector. Stakeholders generally — but especially where infrastructure providers have market power — must have more information than is available through traditional financial reports if they are to assess the performance of management and the board.

- **In designing government controls, there is a need to balance gains against losses that may arise from reducing the freedom of not-for-profit corporations and their scope to innovate and develop improved delivery systems.** Some of the main benefits of commercialization stem from eliminating controls that increased costs and reduced the flexibility of infrastructure operations. It would be unfortunate if these gains were jeopardized by ill-conceived measures to strengthen government control.
- **Stakeholders can be a useful source of discipline where the interested parties can be identified and given adequate representation.** This is not the case with all infrastructure organizations. Moreover, directors' fiduciary obligation to act faithfully in the interests of the organization may limit a board's usefulness as a mechanism for mediating interests.

Airports

Establishing an adequate control framework is complicated by the substantial market power airport authorities exercise in some areas. It is difficult to establish countervailing mechanisms to give those affected — including travellers — the ability to influence airport decisions. Moreover, some important national issues have not been articulated adequately under current federal policy.

The Panel's recommendations focus on these general issues, which apply to both LAAs and CAAs. Some special concerns relate to the governance regime for LAAs. These were the first commercially oriented infrastructure organizations, and their initial structure reflected Transport Canada's lack of experience in developing not-for-profit governance arrangements. LAAs are gradually adopting improved accountability requirements. This process must continue. The LAAs must be subject to mechanisms set out in the more recent airport divestitures, such as

- specific requirements for the composition of the board;
- a requirement for advance notice of price increases along with a published justification for the change;

- greater access to documents and agreements for interested parties and the public;
- competitive tendering for contracts over $75,000 ($ 1994); and
- regular consultation with community and aviation industry representatives.

In addition, there is a need to address concerns about the rental formula that determines CAAs' and LAAs' annual lease payments to the government. There is room for dispute about the level of payments required to compensate the government fairly for the assets it is making available. The current formula, however, linking lease payments to net revenues, reduces incentives for cost minimization.[15] A simplified formula based on passenger traffic would be more consistent with a governance regime aimed at encouraging efficient management.

Airport Improvement Fees

AIFs have become an increasingly important revenue source for airport authorities. The Panel sympathizes with concerns about airports' growing reliance on this revenue source.

Some much needed discipline exists where airlines collect the AIF on behalf of the authority in return for a say on the amount and use of the proceeds. This system has now been adopted at the majority of NAS airports. The Panel believes that **if AIFs are used, they should be collected in a transparent way by the airlines at the time of ticket purchase. The Panel also sees merit in establishing limits on the total AIF payable by a passenger on a single return trip, as is the case in the United States**.

Transport Canada is examining AIFs as part of its LAA lease review. In developing a solution, the department will need to consider how the policy will affect airports that have negotiated loans on the basis of their ability to raise base capital requirements through AIFs. Restrictions on AIFs could delay completion of some important projects now under way. There is also a need to assess how an AIF policy would affect lease revenues and the government's ability to channel revenues from larger airports to smaller and financially weaker airports in the system — an issue addressed in a later recommendation.

Charges to Airlines

Unlike charges by ports and NAV Canada, airport charges are not governed by defined principles, and users do not have a right to file pricing complaints with the Agency. In the Panel's view, all airport authorities should be subject to requirements similar to those that apply to the CPAs and NAV Canada.

> **Recommendation 9.1**
> **The Panel recommends that principles be developed to govern the setting of airport fees for aeronautical services; that airports be required to provide adequate notice of their intention to revise charges to airlines; and that, in the case of disputes over adherence to the principles or process, there be a right of complaint to the Canadian Transportation Agency.**

As with the air navigation system, it should be specified that airport charges are not to raise more revenue than required to meet current and future requirements. The principles should give recognition to the need of smaller airports to mark up some charges to achieve cost recovery. It is less clear that airline charges should be based on costs the airports incur in providing services. Among economists, debate continues on whether, for economic efficiency, it is best to keep aeronautical and non-aeronautical services in separate baskets — the so-called dual till approach — or to allow some degree of cross-subsidization among airport activities. There is evidence, however, that the dual till approach has merits in airports with constrained capacity.

The principles should give airports the flexibility they need to implement efficient pricing under different circumstances. Busy airports should be encouraged to introduce congestion charges during peak periods. An efficient system of aeronautical charges should also take account of important external costs, including, especially, airport noise. In addition to establishing general pricing principles, Transport Canada could play a role in fostering development of more efficient aeronautical charges.[16]

Non-Aeronautical Services

Submissions drew the Panel's attention to some ostensibly troubling aspects of airport authorities' dealings with firms seeking to provide commercial services at airports. The contention is that some authorities are competing unfairly, through their own subsidiaries, thus restricting private sector investment and involvement. The Panel sees a need for principles to ensure fair and non-discriminatory treatment of commercial firms seeking to offer services on airport lands.

> **Recommendation 9.2**
> **The Panel recommends that**
> - **a for-profit subsidiary of an airport authority be allowed to provide a service to the airport only if it is the successful bidder in a fair and open competitive tendering process;**
> - **if an airport authority in its own right (rather than through a subsidiary) undertakes activities that compete with commercial firms, it be required to demonstrate that the decision is in the airport's financial interest; and**
> - **airport land use regulations be required to adhere to basic rules of fairness and equity, including the requirement that affected parties be adequately notified and consulted about proposed changes in airport policy.**

Legislation to Enhance Accountability

A major shortcoming of the accountability regime is the inadequacy of the ground lease as a vehicle for specifying important aspects of governance. As a consequence, the government lacks a reasonable means of enforcing specified requirements. There is a need for legislation with explicit penalties for non-compliance.

> **Recommendation 9.3**
> **The Panel recommends that legislation be introduced specifying governance requirements for LAAs and CAAs and indicating the penalties that can be imposed in cases of non-compliance.**

The legislation would cover requirements addressed in existing ground leases, including

- the need for knowledgeable and skilled directors;
- the requirement for conflict-of-interest-rules for board members;
- the need for a code of conduct for directors that includes duties and responsibilities no less stringent than those applied under the *Canada Business Corporations Act*;
- the requirement to disclose the remuneration of directors and senior officers;

- the requirement for comprehensive review of financial performance and management practices at least once every five years;
- the right of the Minister, at any time, to audit corporate activities as they relate to the lease, to the management of public assets, and to compliance with applicable laws;
- the requirement that specified reports and documents be made publicly available; and
- the requirement for an annual public meeting.

No one should be precluded from sitting on a board because of their job or affiliation. The process for selecting directors should be transparent and based on objective criteria. Nomination committees of existing boards could help identify knowledge and skill criteria to guide selection of new members.

Subsidiaries

For-profit subsidiaries that engage in non-airport related businesses create additional economic risks and complicate the task of monitoring how well airport authorities are performing their core activities. The Panel recognizes, however, that subsidiaries offer airports an opportunity to exploit their skills and resources more fully. Investments in ancillary activities also give authorities an alternative source of revenue to offset downturns in their core market. For-profit subsidiaries should not be prohibited, but they should operate only in clearly specified areas and according to well defined rules.

> **Recommendation 9.4**
> **The Panel recommends that well defined limits be placed on airport authorities' use of for-profit subsidiaries.**

Among other things, these limits should specify

- ancillary activities in which a subsidiary can engage;
- the permissible extent of investment in subsidiary activities;
- the degree of risk the airport authority can assume;
- measures that must be followed to ensure for-profit activities are not being subsidized;
- disclosure requirements regarding senior management compensation; and

- operational and financial reporting requirements with respect to subsidiary activities.

In addition, the Panel supports proposals to eliminate LAAs' and CAAs' legislated exemption from the *Income Tax Act*, which relieves them of the need to satisfy Revenue Canada that they are in fact engaged in not-for-profit activities. Removing the income tax exemption would place airport authorities in a similar position to NAV Canada and the Canada Port Authorities.

> **Recommendation 9.5**
> **The Panel recommends that the airport authorities' legislated exemption from the *Income Tax Act* be removed.**

Reporting Requirements

The Panel sees a need for better information about airport performance. Besides financial data, there is a need for comprehensive performance measurement to shed light on how effectively and efficiently airports are achieving their specified objectives. Interested parties also need information to help them assess major spending programs. Airport authorities should be required to undertake economic assessments of major planned investments, to consult with airlines on these projects, and to make the airlines' position known to the public.

> **Recommendation 9.6**
> **The Panel recommends that airports be required to put in place comprehensive performance measurement systems that adhere to guidelines developed by Transport Canada. For major proposed capital projects, airports should be required to undertake an economic assessment, consult with airport users, and ensure that stakeholders' positions are made known to interested parties.**

Airline Access

The Panel is sympathetic to the suggestion that airport facilities be administered on a common-use basis and be available to any user, including new entrants. This approach would be contrary to current practice in most countries, however, including the United States, where major airlines own their own gates. There is a need to ensure that such an arrangement would not undermine the ability of carriers to plan operations efficiently. In the meantime, the Panel believes it is important that airlines whose ability to compete may be affected by inadequate access to airport facilities have a complaint mechanism available — as proposed in Chapter 7. In addition, as new slots, gates and other facilities become available through airport improvements, it is important to take advantage of potential opportunities to enhance airline competition.

Federal Regulations

Several submissions to the Panel raised concerns about the cost to airports of complying with new federal regulations. Requirements with respect to fire-fighting and emergency response are a significant burden for small airports. The Panel believes there is a need to review such regulations to determine whether their costs are commensurate with the benefits they are expected to produce.

> **Recommendation 9.7**
> **The Panel recommends that Transport Canada review its proposed Aircraft Emergency Intervention Services regulations to determine whether the standards are appropriate based on a careful assessment of costs and benefits.**

Assistance Program for Smaller Airports

The viability of smaller airports was of concern to several groups appearing before the Panel. Interveners noted, for example, that some of the not-for-profit airports are incurring large annual deficits and rapidly exhausting the transition funding they received at devolution. Under the Airport Capital Assistance Program, non-NAS airports are eligible for federal assistance to improve safety, preserve assets or reduce operating costs. In addition, some airports receive other forms of federal support, such as from the Atlantic Canada Opportunities Agency and the Canada Infrastructure Works Program. These are not assured sources of funding, however, that would help smaller airports cover annual operating deficits.

Many smaller airports are important nodes in the domestic air network. The traffic they generate contributes to the financial strength of the system's larger airports. Quantifying the system benefits provided by individual airports is difficult, however. Moreover, the benefits of a well developed system of feeder airports do not justify support for all existing facilities. In many instances, two airports serve substantially overlapping catchment areas. A single larger facility could effectively meet the needs of passengers in the region and, with its larger traffic flow, be in a better position to generate the revenues needed to cover operating costs.

The Panel sees the benefits of a limited program of support to help regional/local and some smaller NAS airports meet their annual operating expenditures. It would be appropriate to finance such a program from lease payments made by the NAS airports that are the major beneficiaries of a well developed network. Assistance to individual facilities should be set below requirements, however, so that airports continue to experience pressure to improve efficiency and reduce operating costs.

The program should also be designed to encourage system rationalization. For instance, the government might initially require groups of regional and local airports to agree to develop a restructuring strategy as a condition for financial support. In subsequent agreements, support could be made contingent on progress in implementing the strategy.

> **Recommendation 9.8**
> **The Panel recommends that a limited program of support be introduced to help smaller airports cover their operating expenditures. The program should be financed from air system revenues and be designed to encourage improved efficiency and create incentives for airport rationalization.**

Air Navigation

In the air navigation system, unlike the airports, interested parties are in a position to influence decisions and constrain the exercise of market power. Regulations governing services and user charges provide an additional measure of control that is also missing in airports.

The Panel finds NAV Canada a useful governance model; at the same time, we encourage the organization to push ahead with developing a comprehensive performance measurement system to allow interested parties to assess the organization's success in increasing productivity, controlling costs and improving service. The Panel also believes a review of the organization's current pricing structure is desirable, to determine whether the higher charges being imposed on larger aircraft are excessive. NAV Canada should examine whether a somewhat different pricing system would allow it to meet its revenue requirements more efficiently.

Ports

The CPAs are subject to a carefully designed governance regime. In some respects, however, the limits on the corporations are too confining. In addition, notwithstanding the current high degree of transparency, stakeholders lack key economic information they need to assess corporate performance accurately.

Borrowing Restrictions

CPAs are agents of the Crown when they engage in core activities identified in the *Canada Marine Act*. Although CPAs cannot borrow as agents of the Crown, the Crown may be responsible for satisfying obligations following a court judgement against a CPA. With the removal of this possibility, there would be less justification for legislative constraints on port borrowing.

> **Recommendation 9.9**
> **The Panel recommends that the provisions of the *Canada Marine Act* making the Crown responsible for liabilities of Canada Port Authorities be removed.**

CPAs' capacity to invest is severely limited by the borrowing restrictions in their letters patent. As with other commercialized infrastructure organizations, determining the CPAs' borrowing capacity should be left to capital markets.

> **Recommendation 9.10**
> **The Panel recommends that borrowing limits in the letters patent of Canada Port Authorities be removed.**

Appointment of Directors

The Minister of Transport makes a disproportionate number of appointments to CPA boards — four to eight of the directors on boards with seven to eleven members. The Minister must consult with users for all but one of the appointments, and some CPAs, such as Vancouver, take pains to ensure that the Minister is given a list of suitable and qualified candidates. Still, reducing the number of federal appointments and increasing the role of interested parties in selecting board members would help to confirm the operational independence of CPAs.

> **Recommendation 9.11**
> **The Panel recommends that the number of directors on Canada Port Authority boards appointed directly by the Minister of Transport be reduced to two.**

Subsidiaries

CPAs can establish for-profit subsidiaries to carry out activities described in their letters patent. Concerns about for-profit subsidiaries are analogous to those described for airport authorities. The *Canada Marine Act* addresses some concerns, but it does not provide a full list of standards that should guide CPAs' behaviour in this area.

> **Recommendation 9.12**
> **The Panel recommends that well defined limits be placed on Canada Port Authorities' use of for-profit subsidiaries.**

Requirements should be spelled out on the same issues enumerated earlier with regard to airport authorities.

Ancillary Services

As with airports, there is a need to assure commercial firms that they have a fair opportunity to compete in providing ancillary infrastructure services. Commercial firms should be allowed to compete on a level playing field against subsidiaries of CPAs. They should also be allowed to bid for the supply of core services where these are defined very broadly in the CPAs letters patent.[17]

> **Recommendation 9.13**
> **The Panel recommends that**
> - **a for-profit Canada Port Authority subsidiary be allowed to provide a service to the port only if it is the successful bidder in a fair and open competitive tendering process; and**
> - **if a port in its own right (rather than through a subsidiary) undertakes activities that compete with commercial firms, it be required to demonstrate that the decision is in the port's financial interest.**

Performance Measures

Like other commercialized infrastructure providers, CPAs should invest in the development of better performance measurement systems. Performance indicators are needed to give interested parties a more complete portrait of corporate progress than is available from financial data. The proposed indicators would, among other things, describe how service quality and corporate productivity are changing over time.

> **Recommendation 9.14**
> **The Panel recommends that Canada Port Authorities be required to develop comprehensive performance measurement systems and to make the resulting information publicly available.**

Review of the Canada Marine Act

A review of the *Canada Marine Act* is mandated for 2003. Some observers believe that a delay in addressing legislative deficiencies could seriously affect the ability of some CPAs to compete with U.S. ports. The Panel agrees that an earlier review of the *Canada Marine Act* is desirable.

> **Recommendation 9.15**
> **The Panel recommends that a review of the *Canada Marine Act* be initiated by the beginning of 2002.**

St. Lawrence Seaway

Although it may be premature to draw conclusions about the performance of the SLMC, the Panel is impressed by the institutional arrangements established to handle Canada's management responsibilities for the Seaway. As the end date specified in the initial commercial agreement with SLMC approaches, consideration should be given to how the government can create a continuing framework to ensure adequate investment while providing incentives to improve operating efficiency.

Notes

[1] Discussed in M. Tretheway, "Airport Ownership, Management and Price Regulation", paper prepared for CTAR, March 2001.

[2] Transport Canada web site: http://www.tc.gc.ca/airports/nap/english/p7.htm.

[3] For example, in his 1985 report, the Auditor General compared facility maintenance at three federally operated airports and three comparable U.S. airports and found personnel requirements at the U.S. airports to be 40% lower. Whereas employees at the U.S. airports served a variety of functions, Canadian workers were hired for specific maintenance functions, resulting in both greater requirements and lower employee utilization.

[4] Transport Canada summarized the results of studies conducted for the review in "LAA Lease Review Consultation Report", 1999.

[5] Letter to the Minister and Deputy Minister of Transport, July 1991.

[6] NAV Canada can terminate or reduce northern or remote services notwithstanding opposition from users or provincial or territorial governments, if it has obtained approval from the Minister.

[7] The approaches being adopted by various countries are described in Civil Air Navigation Services Organisation, "Corporatization of Air Navigation Services", August 1999.

[8] The tensions that can arise as a result of current governance arrangements are discussed in Michel Boucher, "Les Fournisseurs d'infrastructure de transport nouvellement commercialisés: analyse des principes de gouvernance, d'imputabilité et de performance", paper prepared for CTAR, February 2001.

[9] The governance arrangements that apply to the Vancouver and Halifax Port Authorities are described in Margot Priest, "Report on Governance and Accountability: The New Transportation Organizations", paper prepared for CTAR, April 2001, Part II, Section A.

[10] This is discussed from the perspective of 'agency theory' in Boucher, "Les fournisseurs d'infrastructure de transport nouvellement commercialisés".

[11] Air Canada, submission to CTAR, November 24, 2000, p. 14.

[12] Economically correct prices should take account of the cost of maintaining facilities and of the opportunity cost of the investment in infrastructure assets. In determining an appropriate rental payment for the use of Crown assets, there is also a need to take account of the overall financial requirements of the airport and port systems and the impact of lease payments on Canadian infrastructure corporations that are competing for traffic with U.S. facilities.

[13] Problems in applying price cap regulation to UK airports are discussed in D. Starkie, "Reforming UK Airport Regulation", *Journal of Transport Economics and Policy* 35/1 (January 2001). The general issues associated with airport regulation are discussed in Tretheway, "Airport Ownership, Management and Price Regulation".

[14] Corporate governance guidelines have been developed, for example, by the OECD, the Toronto Stock Exchange and the Business Roundtable. These are reviewed in Priest, "Report on Governance and Accountability".

[15] This is discussed in David Gillen, Len Henriksson and William Morrison, "Airport Financing Costing, Pricing and Performance", paper prepared for CTAR, March 2001.

[16] Efficient airport pricing is discussed in Gillen et al., "Airport Financing Costing, Pricing and Performance".

[17] For example, as part of its core business, the Vancouver Port Authority can operate restaurants, bars, retail stores, offices, entertainment activities, tour operations and some tourism-related activities. Activities can be pursued, however, only if it is determined that a leasing or licensing arrangement is not practicable or not in the best interests of the Authority.

Chapter 10
Paying for Roads

Roads are not an explicit part of the Panel's terms of reference, being largely outside federal jurisdiction and not addressed specifically by the *Canada Transportation Act* or the other legislation under review. Nevertheless, many submissions to the Panel urged federal leadership on roads as part of national transportation policy. The Panel was not anxious to add roads to the imposing list of issues under consideration, yet members believe strongly that the interrelated components of transportation should be dealt with by a set of interrelated policies. Moreover, separate treatment of the modes, by separate agencies, has led to some inefficiencies and barriers to innovation. The Panel's goal is to encourage innovation and integration among the modes to achieve the most efficient transportation solutions, despite the jurisdictional and organizational obstacles. We therefore offer a review of road issues, particularly funding issues, and some suggestions for future policy.

The Network and the Traffic it Carries

Roads — and the cars, trucks and buses that use them — are the core of the transportation system and likely to remain so for the foreseeable future. In a country with Canada's dimensions and dispersal of activities, aircraft, urban transit, trains and ships play crucial roles in carrying passengers and freight, but roads continue to carry most of the traffic. Most passenger travel is entirely by road, using private vehicles, or, much less frequently, bus service (urban transit, school, chartered or scheduled intercity buses). Of all freight traffic, something approaching half makes its entire journey by truck, and most of the remainder that is hauled by train, ship or aircraft relies on truck transport at one or both ends of its trip.

Canada's public road network extends about 900,000 kilometres.[1] Only about 15,000 km are owned and maintained by the federal government, mostly minor roads in parks and on other government property. The Trans-Canada Highway — stretching 7,500 km — was designated in 1949 and its initial upgrading paid for by the federal government, but it remains under provincial ownership. Some 231,000 km of the national network are owned by provinces and territories, mainly higher-capacity primary or secondary highways, including the segments of major highways running through urban areas.

The remaining 655,000 km are owned and maintained by municipal governments, including streets and arterials in towns and cities, as well as the extensive sub-network of rural access roads. These latter roads naturally reflect settlement patterns and are particularly extensive across the Prairie provinces, which together have more than half the country's roads, serving their dispersed rural communities. About 65% of the national network is unpaved, in particular much of the rural access network. There are also about 32,000 lane-km of limited-access highways, including rural freeways and urban expressways and some 344 route-km of toll roads.

Traffic Trends

Road traffic totals an estimated 270 billion kilometres annually.[2] It is dispersed very unevenly: an estimated three-quarters of all traffic travels on just one-quarter of the network and 40% travels on just 5%. This includes the 16-lane stretch of Highway 401 through Toronto, which vies with California's Santa Monica Freeway as the busiest road on earth and handles 350,000 vehicles daily — the equivalent of all lanes operating at full capacity for more than 11 hours daily.

By contrast, most of the provincial highway network — including substantial stretches of the Trans-Canada Highway — sees fewer than 3,000 vehicles a day, when all have the capacity to handle that many vehicles in an hour. Municipal rural access roads handle much less traffic, of course — probably fewer than a hundred vehicles daily on average.

The road network and its capacity continue to grow. Rapid growth of residential suburbs, along with the more recent phenomenon of dispersing commercial activity away from city centres, have been facilitated by extending the road network, by streets and arterials in newly developed areas, and often by urban expressways linking them to city centres. The intercity network has also expanded, mainly through additional lanes on existing highways, but also through new high-capacity links replacing older secondary roads. The capacity of existing links has also been increased in other ways, including upgraded alignments, added paved shoulders, and continued paving of additional parts of the extensive network of rural gravel roads.

Road traffic is increasing fast. Traffic has expanded almost continuously since automobiles were invented, arrested only briefly in the deepest of economic recessions. Most traffic is passenger travel in cars and light trucks,[3] which has expanded at a faster rate than population or national output. Over many recent decades, truck traffic grew at a rate similar to or slightly less than national output (as might be expected, since the economy expanded largely through the growth of services). But in most of the last decade, truck traffic has grown faster even than the booming general economy, under the twin stimuli of innovations in logistics management and North American free trade.

Traffic has certainly grown faster than the capacity of the network, and faster in particular than the capacity of arterial and expressway systems in and around major cities. In part, this represents a more efficient use of roads, as they have usually been built with much greater capacity than necessary to handle existing traffic and to cater to daily and seasonal peaks; they can accommodate extra traffic, especially when it shifts to off-peak times. But as traffic builds and vehicles increasingly impede each other, traffic growth may well exceed an efficient level. Congestion has become a serious problem in major cities, an impediment to activities, and an important source of added costs for commercial traffic. Congestion is also hindering passenger and truck traffic on some interurban highways, notably those in or close to larger cities and at the busier Canada/U.S. border crossings.

All the underlying trends suggest road traffic will continue to expand rapidly. Car ownership and use have usually risen faster than population, household income, and national output, so increases in all these indicators in coming decades can be expected to stimulate further traffic growth. Recent forecasts anticipate population growth of about 0.9% a year from 2000 and 2015 and annual GDP growth of about 2.4%.[4] If car use follows past patterns, it can be expected to grow by more than the latter figure, or by close to 3% a year. At that rate, total car use would be 50 to 60% higher in 2015 than in 2000. Those that argue this is unlikely — because car ownership must be nearing 'saturation' — need look no further than the United States, where the average number of vehicles per person is about 30% higher than in Canada and still rising. (The average is now greater than one vehicle per person in several states, while in Canada it still averages less than 0.6.[5]) Forecasts of rapid population growth for the largest cities also suggest accelerated growth in car traffic — if, as seems likely, growth continues to be accommodated by expanding suburbs with lower residential density, greater distances to workplaces and services, and less access to public transit than in older residential areas.[6]

Truck traffic also appears destined to grow substantially. It will not likely match the pace of the last decade, when logistics restructuring and NAFTA played such important roles. But federal forecasts are still that trucking growth will be faster than growth in rail or marine freight tonnage, at about 1.9% a year. This would imply a one-third increase in trucking tonnage between 2000 and 2015.[7] Furthermore, if recent trends toward general dispersal of markets and smaller shipment sizes continue, truck traffic in vehicle-kilometres will grow even more than tonnage.

Funding the Network

Governments have recently spent about $11.6 billion a year on roads; if private toll facilities are included, annual spending approaches $12 billion. This includes most construction and maintenance and much of the spending on enforcement, safety and policy activity.[8] These amounts are not quite the same as 'road costs' as a business would calculate them. A business would recognize that some expenses (maybe half) are capital costs — that is, expenditures on assets that will be around for a long time — and would use an amortization schedule, based on the projected life of the assets, to account for depreciation. Governments do not normally account for capital assets this way, but simply include capital spending with operational spending.

The most common way of paying for roads is to use general tax revenues — that is, tax revenues collected without specifying a designated use. At the federal, provincial and territorial levels, this means that roads are paid for mainly out of annual appropriations from consolidated revenue funds. At the local level, roads are paid for mainly from property taxes, although senior levels of government provide grants in some areas. (Exceptions are noted later.)

Dedication of road-related taxes or fees to road uses is rare, but the amount road users pay in fees or charges can be estimated roughly. In 1998–99, for instance, users paid an estimated $6.8 billion in provincial and territorial special motor fuel taxes, $4 billion in federal excise taxes on road fuels, $3.1 billion in vehicle registration and driver licence fees, and about $0.4 billion in tolls — for a total of about $14.3 billion a year, compared to the roughly $12 billion spent on roads.[9]

Clearly, governments are collecting more road-related revenue than they are spending directly on roads. The focus of the policy debate over road funding is that the federal government receives the largest part of the excess revenue:

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its revenues from road fuel taxes are $4 billion or more, while its recent annual spending on roads has been only about $200–300 million. Together, then, the other levels of government are receiving about $10 billion in direct revenues but spending nearly $2 billion a year more than that. That shortfall is made up by local property taxes.[10]

Faced with these funding realities, some advocates for builders and users of roads suggest — as some did in submissions to the Panel — that the solution to congested roads is simple: use the excess revenues to build more roads, extend the network and expand the capacity of existing roads. They argue that congestion is evidence of the need to do this; reduced congestion costs — the value of the time savings to travellers and businesses — would be sufficient to justify the cost of considerable expansion. Advocates suggest that major additional benefits from roads — such as facilitating trade and economic growth and improving safety — justify upgrading the entire network.

The particular target is the federal government's net revenues from fuel taxes. Advocates contrast Canadian practice with the U.S. government's dedication of road use taxes and fees to a Highway Trust Fund and argue for equivalent federal action here. Others point to new institutions for funding and managing roads elsewhere, notably the innovations in New Zealand.

Provincial and territorial departments of highways and transport have supported this approach, arguing that the federal government's excess of revenues over spending is unjustifiable. They support the claim with their National Highway Program proposal, developed initially in the late 1980s. The proposal entails designating a network of major highways — mainly those linking capitals and major border crossings or ports — as the National Highway System, with a total length of about 24,000 km. This is just 3% of the total road network, but it carries about one-quarter of national traffic. The proposal specified uniform engineering, construction and maintenance standards for the system. Much of the existing network did not meet the standards, particularly in more remote sections (notably northern Ontario and north to the territories). The cost of upgrading was estimated at more than $12 billion in 1989. Provincial and territorial transport ministers proposed to the federal government a cost-shared program to undertake the work over several years. In an updated proposal in 2000, they suggested the required upgrading would cost $17 billion, again paid for through a cost-shared program; the federal contribution would consist of 2 cents per litre of road fuel excise tax revenues. At current consumption rates, this would approach $1 billion annually.

The federal government has not responded formally to the proposal but has continued to provide much smaller amounts of road funding through short-term federal/provincial agreements, usually in the range of $100 to $200 million annually, distributed unevenly among the provinces, with no national strategy or analytical criteria to guide the amount, purpose or destination of funds. Most recently, funding of $600 million over four years, beginning in 2002, was announced as part of the federal infrastructure program. Clearly this is only a small fraction of the amount requested.

Environmental Concerns

Increasing traffic, exacerbated in urban areas by congestion, brings unwelcome social effects: emissions of air pollutants and greenhouse gases, noise and neighbourhood disruption, and growing numbers of road accidents. These are also important political concerns, both for their immediate impact on health and the quality of urban life and for their potentially larger long-term implications. They have generated an important debate about whether existing trends in transportation, and road use in particular, are sustainable: can the natural environment withstand them, and will resources — vehicle manufacturing materials, fuel, land — remain available to permit them. Sustainable development has become a stated goal of all levels of government, and a key question is whether road use must be deliberately curbed to achieve it.

That question is prompted partly by the availability of alternatives that might be much more sustainable. Walking, biking and using public transit could replace some urban mobility, reducing congestion and environmental impacts. Buses, and potentially trains,[11] could replace some intercity car (and aircraft) use, again with less environmental impact. Trains and ships could replace some truck use for freight. Some road use might be avoided relatively easily, without switching modes, by combining car trips or raising truck productivity by increasing loading or reducing empty running.

The fact that Canadians are not adopting these alternatives to a greater extent — especially when they would often be cheaper in terms of out-of-pocket costs — shows how much users value the service qualities they get from cars and trucks: speed, convenience, flexibility, reliability and comfort. But it also reflects the fact that road users do not have to cover the whole cost of road use, because of the way governments fund road infrastructure, and because most users do not have to deal personally with some of the unwelcome social effects. If they had to do so — if road users were charged directly on each trip for the cost of maintaining the road network, as well as for the costs of congestion, environmental damage and accident risks that their road use imposes on others — it seems likely that their choices would change and more of the alternatives would be used. This possibility poses crucial policy issues for governments at all levels.

Appropriate Charging for Road Use

Economists suggest that achieving the efficient amount of road use — and balanced use among all modes — is a question of charging users for the real costs they impose. The technology to permit direct charging exists — as, for example, on Ontario's Highway 407 and many other facilities world-wide — and is developing rapidly. The major obstacles include uncertainties about what the costs and charges should be and, more important, lack of consensus that users should be held responsible for costs.

Infrastructure Costs

Making users responsible for costs means, first, that users would pay incremental infrastructure costs — the actual amount of road wear the vehicle imposed, valued at the cost of replacing it. This can be estimated from engineering relationships and varies radically with the type of road construction and vehicle characteristics — principally the number of axles and their loads (which determine road surface and structural wear) and the total weight of the vehicle (particularly important in bridge wear). In other words, the cost would be much higher for a truck than a car; for trucks with similar loads it would be higher for one with fewer axles; and for any given truck it would be higher when loaded than when empty.

Then there is the question of how to cover the joint or common costs of roads. As with railways, some large components of road capital costs do not vary with traffic, including some construction costs (land, clearing, grading), as well as significant amounts of deterioration that result from time and weather. The latter are particularly large as a proportion of total wear for more lightly used highways and rural access roads — perhaps as much as 80% of total deterioration.[12] Also invariant with traffic are the opportunity costs of the capital employed in roads, which modal equity would suggest should be represented in charges for roads, as they are for private rail and should be for other publicly funded infrastructure, notably airports and ports.

Whether and how these common costs should be charged to users are as thorny questions for road infrastructure as they are for rail infrastructure. In principle, a differential pricing scheme for roads, based on the value of service, could be economically efficient, as for rail track. But this is an academic abstraction in the absence of controlled access to roads. The efficient solution proposed for roads, and already partially approached in current practice, is to cover common costs through annual network access fees — like motor vehicle licences.

No thorough analysis of road costs and traffic has ever been undertaken in Canada to reveal how incremental infrastructure costs vary by class of vehicle and class of road and how common costs might be met through annual charges. Such a study would be a prerequisite for designing efficient charges. It would also remedy the perennial lack of data.

Social Costs

Next, road users would need to face the congestion, accident and environmental costs they impose, even if they do not suffer themselves. Economists refer to these as 'external effects', or 'externalities', meaning that the people who create them do not take them into account (or 'internalize' them) in their decisions. The obvious practical problem is that few of these 'costs' have a dollar value; instead they involve some sort of discomfort or inconvenience — difficult even to measure. Nevertheless, financial values can be inferred for them, for example, by observing the amount of money people are willing to pay to avoid the effects or are willing or accept in compensation for them.

There is considerable research along these lines, but the magnitude and value of external costs remain a source of debate; environmental advocates and community defenders tend to propose much higher values than advocates for road users. The range is broad, with the greatest disagreements centring on the values to be attached to environmental damage and accident risks (although the largest component would probably be time losses resulting from congestion). Costs would naturally be location-specific and time-specific, because congestion changes rapidly and, like emissions and accident risks, varies by location and time. (Examples: damage costs per unit of emission of ozone precursors would vary by season; serious accident risk would probably vary inversely with congestion.) Costs would undoubtedly be much larger in urban areas than on rural highways or local access roads, where they might indeed be negligible. They would be highest in and around major cities, where congestion and air pollution problems are greatest, but even in those locations, they would vary substantially by time of day and season.

Again, incorporating these costs in practical road charging schemes would require further serious work to gain consensus on acceptable amounts and to identify how they vary with vehicle type and traffic conditions.

An Efficient Charging Scheme

In summary, an efficient scheme to charge for road use, combining infrastructure and externality costs, would vary by type of vehicle, type of road, time of day and season. Annual licence fees might be higher than currently, to cover fixed costs. Charges would likely be much higher in urban areas at peak times than on intercity highways or rural access roads. They would probably be higher (relative to what users now pay in the form of fuel taxes) on secondary highways and local rural roads and lower on major highways.

In practical terms, the most obvious components of such charges would be axle-weight-kilometre charges for trucks, eventually differentiated by class of road, and congestion charges per kilometre for all vehicles in urban areas, differentiated by the amount of road space they use.

Even using minimal values for external costs, such a scheme would likely be enough to cause significant changes in road use. The most pronounced effects of congestion charges would probably be to encourage combining of car trips, or shifting them to off-peak times, while increased charges for emissions would induce shifts to more efficient vehicle technologies and alternative fuels. Urban transit would also gain some traffic, and there is potential for increased use of intercity buses as well. Importantly, charging for the full cost of road use should mean that transit would eventually no longer need general subsidies, as its relatively lower social costs would be evident to users when they compared public transit fares that included all its social costs with charges for road use that did the same.

Charging trucks for road use would probably induce some shift in configurations, to those with lower axle loads, and further efficiencies in operation, through larger loads and greater load co-ordination. Some shift to train or ship, or to more intermodal trips, might also occur. An interesting detail, given the Panel's consideration of rail network issues, is that appropriate charges for Prairie road wear by grain trucks might influence producers' elevator choices and relative amounts of truck and rail use.

A system based on full charges for road use would generate revenues higher than the current cost of road wear, in that charges would include the cost of congestion and other externalities. A major technical and practical question is whether revenues from congestion charges on urban roads or streets, and from other externality charges, should be added to road investment funds.[13] To the extent that their purpose was strictly to induce appropriate use and modal choice, these revenues should not be spent on roads but should be added to general revenues, permitting reductions in other general taxes. Moreover, efficiency would require that alternatives in other modes that met the same objectives more cost-effectively take priority in allocating the funds.

Alternative Road Management and Financing

Canada has a rich history of highway financing policies, ranging all the way from treating roads like any other privately produced commercial good to treating roads like a public good paid for by the general taxpayer. When interurban roads were first built in the nineteenth century, it was not uncommon to let private interests finance, build and operate them, just as private interests operate the major railways today. But during the twentieth century roads became the responsibility of governments. As this happened, provinces tried different ways to pay for them. All provinces have at one time or another used various forms of earmarked or dedicated taxes, mainly vehicle registration taxes and fuel taxes. Often, they placed revenues from these taxes in a special account or road fund. Eight provinces have had road funds in the post-war period, and at least four still exist in one form or another — only one is a province-wide fund with earmarked tax revenues; the others are either dormant (they exist but are not used), small-scale (only a small group of users), or an accounting framework (no earmarked or dedicated tax revenues). Four provinces have had broad experience with using tolls to pay for roads (or bridges or tunnels).

After the Second World War, the idea that roads were public goods, to be paid for from general tax revenues, became the predominant view of road finance. The 1950s and '60s saw a resurgence in the use of tolls, notably on Quebec's autoroutes, but with some exceptions, toll roads had largely disappeared by the 1980s.

Today, methods of paying for roads that do not follow the common approach — and are putting roads on a somewhat more commercial basis — include the use of tolls, the use of urban transportation agencies with some form of taxing power or access to road user taxes, and road funds. There can be some overlap among these methods. A brief summary of where these methods are used follows.

Toll Roads

There are 19 toll facilities in Canada, 12 of which are bridges or tunnels between Ontario and the United States. Four facilities — British Columbia's Coquihalla, Cobequid Pass in Nova Scotia, Confederation Bridge, and Ontario's Highway 407 (the latter demonstrating the technology for all-electronic tolling) — have been built since 1986. The total length of these toll roads (344 kilometres, counting just half the length of the international bridges and tunnels) is not much compared to some other countries. The United States, for example, has several hundred toll facilities with a total length of 7,589 kilometres. France has more than 6,300 kilometres of toll roads. Nevertheless, the 474,000 daily trips motorists make on Canadian toll roads and their estimated annual revenues of $279 million constitute a significant part of total road activity. Four more toll roads are under consideration in Quebec, Ontario and British Columbia.

Urban Road Agencies

At least five major urban areas have either institutions or arrangements that result in a slightly more commercial approach to road finance. In fact, many of these new arrangements at the local level are more concerned with transit services than with roads, but in at least two areas (municipalities around Montreal and Vancouver), urban agencies have new powers to tax road users. Three other urban areas (Calgary, Edmonton and Victoria) have access to some portion of provincial fuel tax revenues. This makes urban road financing slightly more user-pay than in the past.

Road Funds

A road fund involves administering road revenues and expenditures separately from general government finances. At a minimum, this entails merely a separate set of accounts, but it could be extended as far as an autonomous agency responsible for funding and managing the road network.

Some provinces are experimenting with road funds where earmarked taxes or other charges are used specifically to pay for roads. Quebec uses its road fund to put a more appropriate accounting framework on road spending (though it is not funded with dedicated taxes). British Columbia established a transport capital fund in 1993, complete with a new Crown corporation, with dedicated tax revenues used to finance projects, based on evaluations using cost/benefit analysis techniques and other criteria. Saskatchewan has a small-scale road fund — it directs only the spending of permit fee revenues from some trucks — but some of its features are compelling if the goal is to put road finance on a more commercial footing. For one thing, the permit fees deposited in the fund are very specific charges that recognize vehicle characteristics and the attributes of the roads they are using. For another, road users have a say in spending the money raised.

Accurate numbers are not available, but a rough estimate suggests that these three approaches — toll roads, urban agencies and road funds — generate about $840 million a year from taxes, fees and tolls that are more or less dedicated to road spending. This is 7% of total road spending.

Notwithstanding the current use of road funds and their historical use by at least eight provinces, no province or territory has seriously considered using a full-scale road fund as suggested by the World Bank, with the key aspects of self-sufficiency, based on charges for use, and users approval of spending decisions.

Road Funds as the Basis of Future Commercial Management of Roads

The World Bank has been instrumental in prompting consideration of appropriate road management processes and has encouraged the institution of road funds in developing countries to bring discipline and efficiency to road management.[14] The Bank proposes that a road fund's key components should include

- network-wide responsibility;
- financial self-sufficiency — with revenues matching spending;
- direct charges reflecting infrastructure costs and potentially congestion and other external costs;
- rational priority setting for maintenance and investments, using economic evaluation;
- independent executive authority (without political decisions on revenue allocation);
- user representation in decisions on charges and spending; and
- third-party monitoring of performance.

All these could be achieved by reorienting traditional government approaches, but the Bank recommends a separate agency, believing that it would be more likely to pursue efficiency. More direct representation of users is crucial: users who are aware of what they are paying for would be more likely to insist that the network be maintained appropriately — but not be expanded excessively or gold-plated — and more likely to accept charges that induce cost-reducing behaviour.

Some 55 countries have some form of road fund, although virtually none has all the characteristics recommended by the World Bank. Indeed, the road fund most familiar to Canadians, the Highway Trust Fund in the United States, is not among the funds recommended by the Bank. The U.S. fund in particular lacks an objective process for allocating spending to projects based on their likely benefits (as anyone observing the politicized U.S. authorization process can attest).

The country closest to Canada in an institutional sense with a road fund that meets World Bank criteria is New Zealand. Transfund New Zealand is a stand-alone government agency that finances roads and alternative modes. Its board consists of five members, two representing the national highway operating agency (Transit New Zealand), one representing road users, one local government, and one other public interests. Its funds come from the National Roads Fund, a dedicated fund made up of revenues from road users: a fuel tax surcharge, weight-distance charges for trucks, and motor vehicle registration fees. Government still sets all fees, with advice from users, but Transfund is responsible for all spending decisions.

Road safety enforcement is a first charge on this fund. The balance of the fund is transferred to the National Roads Account, which pays for all maintenance and construction costs on state highways and contributes about 50% to the cost of approved maintenance and construction on local roads. Provision is made to fund alternatives to roads, for both freight and passengers, where other forms of transport — bus, rail, ferry or barge — may be more efficient than road transport. Transfund also contributes between 40% and 60% of the cost of subsidized passenger transport services operated or funded by regional councils. All project proposals are compared using formal cost/benefit analysis and funded in order of priority.

An institution like Transfund embodies several principles the Panel finds commendable. The funding is transparent, and users consent to it. Spending is allocated according to objectively established priorities. Projects in other modes that address the same objectives can compete with roads projects and be funded if they are more efficient. Charges, including weight-distance fees, are related more directly to the incremental costs of infrastructure, and so induce cost-reducing decisions on vehicle configurations and use. As technology to permit location- and time-specific charging becomes more available, it could easily be adopted to fund this type of agency.

Of course, a major difference is that in New Zealand only two levels of government are involved, with the senior one having full responsibility for the agency.

Considerations and Recommendations

National roads policy is at something of an impasse. Under business as usual, demand for road use is expected to keep expanding rapidly, and with it congestion, environmental and social costs. The distortions of current charging policies — promoting an over-extensive network, excessive road use, and under-use of other modes — are widely recognized, yet governments are not considering any serious proposals for reform. The only formulated proposal on the table, the National Highway Program, calls for major expansion of funding with no change in charging.

The NHP proposal and its predecessors have now been before the federal government, and presumably Cabinet, for many years without gaining acceptance. We can only speculate on why the proposal has been unsuccessful, but it seems likely that several interrelated issues have been important — apart from the obvious point that the government would likely relinquish a successful source of general revenue only in the face of an overwhelming argument.

- First, it seems unlikely all the spending to upgrade the national highway system would be worthwhile. The NHP proposal includes an analysis of costs against benefits, mainly in time savings and accident risk reduction, converted to plausible equivalent dollar values. This showed that overall the program's benefits would exceed its costs;[15] but it is probable that most of the benefits would be generated by a minority of the projects and that many, if not most projects would not show a net benefit when assessed independently.[16]
- Consequently, there is the question of how any new national funds should be directed to projects providing the greatest benefits. These are likely to be in more congested conditions and therefore in and around urban areas, particularly the three largest — Vancouver, Toronto and Montreal. A national ordering of priorities would therefore differ substantially from the combined lists of the governments that must co-operate in the program.

This also challenges the designation of the national highway system, which includes many low-volume rural highways and excludes higher-volume ones in major population centres.

- An additional question is whether there are more efficient alternatives to greater road use — either shifts to other modes or efficiencies within road use. It seems clear in particular that some urban transit investments would produce greater benefits than road investments — as the Panel suggests in Chapter 12.

Reforming Transportation Funding and Management

The Panel believes the way out of the policy impasse is for governments to co-operate in reforming federal/provincial/territorial roads and transportation funding and management processes. The federal government should offer to contribute to a funding and pricing solution that improves the efficiency and sustainability of the transport system. The Panel is convinced that road wear and the use of congested road space would be reduced if users were required to pay the costs directly. Investment requirements would also be reduced if the only investments undertaken were those justified by their user benefits and if alternative investments in other modes were undertaken when they produced even greater benefits. In the long term this would allow road network size and quality to be adjusted to meet the demands only of users prepared to pay the costs, as is the case for commercial transport modes.

The Panel is also convinced that the future of highway use charging includes real-time charges and that this will permit differentiation according to the vehicle characteristics and use that determine infrastructure and external costs. Moreover, immediate benefits could be gained through changes in management using existing road charges (fuel taxes and licence fees).

The Panel believes therefore that governments should establish the institutions and procedures necessary to achieve these efficiencies. We concur with the World Bank's assessment that the necessary reforms could be achieved by reorienting government departments responsible for administering roads and transportation, but that they are more likely to succeed if new agencies, with new mandates and powers, are created.

Agencies' mandates should include receiving revenues from road use charges and directing spending. Explicit approval of spending by the user community should be required. Users should be included in governance processes — as in the commercialized infrastructure agencies described in Chapter 9 — with at least as much involvement as in the major airports and possibly even involvement in directing the agency, as in NAV Canada. The Panel also believes that alternatives to road spending that meet the same objectives should be allowed to compete for available funds; agencies should therefore have a mandate to consider them on an objective basis.

The major issue in designing the agencies is which networks they would be responsible for. In part this is a question of which roads are sufficiently interrelated that their revenues should be pooled and their maintenance and investments planned jointly. The main highway network is the obvious candidate as the base network, especially as it could clearly be self-sustaining, relying on revenues from variable use charges and annual licence fees.[17] But then decisions would be needed on whether rural and urban local roads should be added. For rural local sub-networks, it seems inevitable that direct charging could not cover the costs and that either a cross-subsidy from the major network's direct charges, or alternative payments from fixed system-wide licence fees, would be necessary.

Alternatively, and notably for roads providing access to remote communities, it is possible that direct subsidies would be warranted, rather than cross-subsidies from other roads (an issue that applies to all modes). For urban local sub-networks, on the other hand, it seems clear that surcharges for congestion and other external costs could provide more revenues than needed or appropriate for road system spending; thus there is a strong argument for local authorities continuing to administer revenues and make planning decisions.

Some of this discussion is of course academic, given shared jurisdiction for roads — in terms of both raising revenue and spending it — and the difficulties of changing current institutions. The Panel believes nevertheless that removing current distortions is vital enough to transport sector efficiency — and therefore to national economic and social well-being — that ways around the impasse should be pursued. Solutions would require serious negotiation among governments and probably major concessions. The Panel cannot foresee the outcome but can point toward institutional reforms that could be successful.

Redirecting Federal Fuel Tax Revenues

Possibly the most important and contentious issue is the future of federal fuel tax revenues. The tax is clearly a major irritant to other governments, and to organized road users, in particular because it is undeniably part of the price paid for road use, yet one from which they see no benefit. It is arguably just a 'sumptuary' tax, but such taxes have all but disappeared (alcohol taxes are the prominent exception), and public expectations are increasingly that taxes should be non-discriminatory. Provincial/territorial fuel taxes are also exceptional, but can be justified in principle by those governments' spending on roads. Federal fuel taxes stand out as having no evident justification in the eyes of road users.

Further, as noted by the Technical Committee on Business Taxation, to the extent that taxes on transport fuels are paid by businesses, they can create distortions between those that use fuels intensively and those that do not.[18] The Panel sees this as a legitimate concern about federal taxes on all transport fuels, including those used by rail, domestic aviation and domestic shipping. More particularly, the Panel believes the federal road fuel tax is inhibiting efficient road pricing related to system costs. It would also inhibit creation of road agencies of the type we recommend.

The Panel's proposal is that federal fuel taxes be recognized as part of the price paid for the use of road infrastructure or, alternatively, as charges for environmental externalities. It is certainly plausible that fuel taxes in all modes could be considered charges for greenhouse gas emissions and reasonable that the federal government would make such charges — that was indeed part of the plan proposed by the Transportation Table for the National Climate Change Strategy.[19] Logically, however, such charges should then be applied consistently to all carbon fuels, in all sectors, based on their greenhouse gas emissions.[20]

The Panel suggests that the government should be prepared eventually to assign road fuel tax revenues to a transport funding agency (or agencies) of the sort proposed. These federal revenues could seal the intergovernmental partnerships needed to create the agencies that would ensure efficient roads provision.

Options for Funding and Management Agencies

The Panel sees three broad options for establishing an agency or agencies to improve road system efficiency through charging, management and spending decisions.

At the simplest level, a federal roads and transportation funding agency might be created to address the National Highway Program proposal, disbursing federal funds from the fuel tax to projects proposed by other governments on a cost-shared basis. Such an agency might be able to introduce some elements of improved efficiency in spending, especially if it could insist that spending proposals be subject to objective economic analysis that included consideration of externalities, and if it could fund spending on other modes where it was shown to be more beneficial.

But such an agency would still be no more than an instrument for disbursing federal funds, not for funding and managing a national highway system. It would not be able to fulfil the major purpose of an innovative agency — determining the appropriate amount of spending and designing efficient charges. Also, as a federal agency, without direct powers to charge for road use, it would have no practical possibility of ever converting fuel taxes to more efficient charges, such as axle-weight-kilometre charges and congestion charges.

A second alternative might be for the federal government to persuade other levels of government to share the cost of funding a roads agency responsible for the national highway system (or another agreed designated system). The agency would administer a fund, into which the federal government would deposit its tax receipts from the designated system. (If it were the national highway system, this would be close to 25% of federal fuel tax revenues, or about $1 billion a year.) If provincial/territorial taxes and fees associated with use of the designated system were also deposited, the agency would have the considerable advantage of being able to take full responsibility for managing the system, with the possibility of determining the efficient level of charges and spending. Charging and spending policies would be managed by an independent board, with representation from users and the funding governments.

The agency would be receiving and managing funds from the most lucrative part of the road network, so it would also be necessary to work out whether network inter-relationships justified the agency funding parts of the rest of the network, as seems likely. It would also have opportunities to pursue the technological innovations in charging the Panel sees as necessary.

Further, it could take on a multi-modal role, notably by considering alternatives to expanding the national highway system's congested links through major cities — for example, commuter rail or other forms of public transit — and funding them when they offered superior benefit/cost ratios. In principle, this could also be extended to marine or rail freight infrastructure projects that provided alternatives to highways.

Finally, as a third possible approach, the federal government could offer each provincial and territorial government an annual sum reflecting federal fuel tax receipts, in exchange for a commitment to

- establish a roads and transportation funding and management agency. Along the lines of the New Zealand model, the agency would have authority for advising on road charging principles and mechanisms; receiving revenues from charges; and allocating them among operating agencies. The agency would be managed by an independent board, including user representatives;
- give the agency a mandate to consider alternatives to road spending in other modes, notably urban transit, and the power to fund those offering greater returns than road investment; and
- co-operate in an intergovernmental body that would develop evaluation methodology, provide analytical services, and recommend on intergovernmental policy co-ordination.

As discussed in the next two chapters, the Panel believes this option would also offer the possibility for intergovernmental agreements on an even more integrated national transport strategy, across all modes, that included all local infrastructure and services now funded by the federal government — notably some intraprovincial passenger rail and ferry services, bridges, and possibly the St. Lawrence Seaway. In return for agreed additional payments by the federal government to the funding agency, responsibility for and authority over these intraprovincial services and infrastructure would shift to the province or provinces concerned.

The Panel does not suggest that institutional change of this scope would be easy to achieve. There would be serious technical issues to resolve, such as the extent and nature of networks intended to be self-sufficient, and how to fund and manage parts of the road system that are not commercially viable but deemed necessary on social equity grounds. Other challenges arise in the design of efficient yet practical road charges and the evaluation methods used to compare the social costs and benefits of competing uses of funds in different modes. These are difficult questions indeed, but the Panel believes they could be resolved by agencies dedicated to efficient management.

There are probably even greater political obstacles in governments' commitment to current funding and spending processes and institutions. But the Panel is convinced that the existing system is dysfunctional and that radical reform will be needed eventually. Efficient charging mechanisms and institutions to manage roads and other infrastructure are already in place or under development elsewhere, and they are bound to be adopted more generally, especially as technology improves. Further discussion of the practical possibilities for institutional reform is provided in Appendix 3, and illustrations of two possible organizational frameworks are shown in the accompanying boxes.

Provincial Agency for Primary Highway System

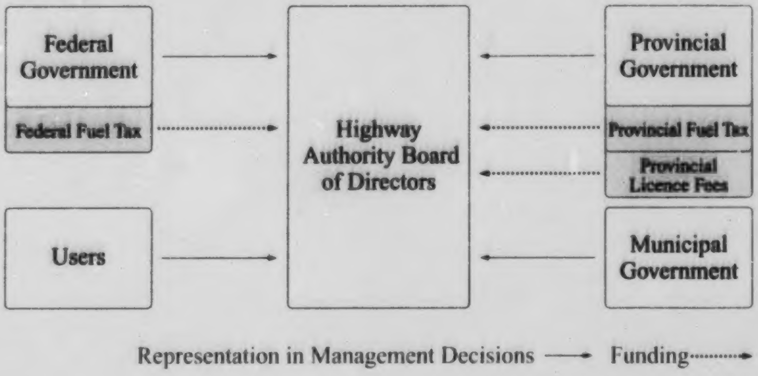
The Concept

Federal and provincial governments contribute (an estimated) share of fuel tax revenues generated by traffic on the primary highway system, plus licence fee revenues.

The board of directors of the road authority includes representatives of

- highway system users
- municipal governments
- federal government
- provincial government

Schematic of Provincial Primary Highway Agency


Federal Government
Federal Fuel Tax
Users
Highway Authority Board of Directors
Provincial Government
Provincial Fuel Tax
Provincial Licence Fees
Municipal Government
Representation in Management Decisions
Funding

Possible Four-Sector Roads and Transport Fund

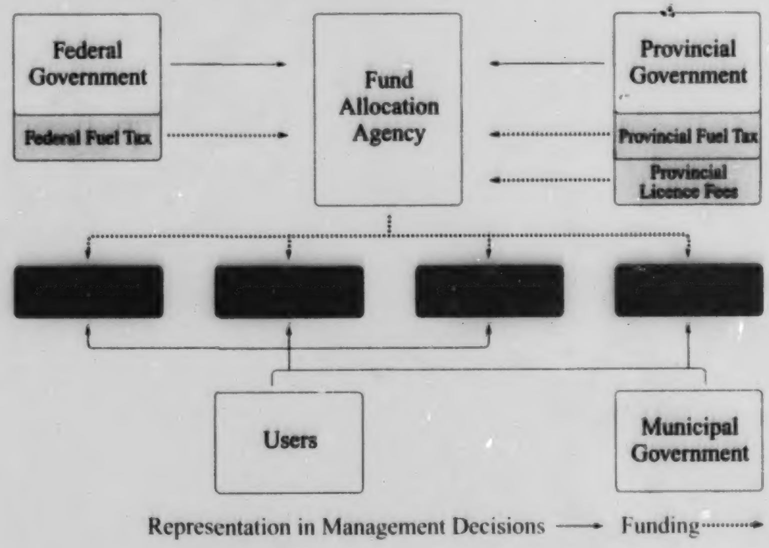
The Concept

The funding allocation agency receives federal and provincial user fees (fuel taxes and licence fees) and allocates them among three types of fund, each with a board of directors (as described in the previous box), *and* authorities responsible for residual municipal streets.

- The primary highway fund would manage the main highway network.
- The urban transport fund(s) would be responsible for an urban region, including roads and urban transit investments that provide greater benefits in relieving road congestion.
- The secondary road fund would include secondary and remote roads and possibly public transport alternatives.
- Municipal street authorities would retain primary responsibility for funding local roads, but with some portion of funding from the agency.

The funding allocation agency would decide on criteria for allocating funds to the four sectors. (Note: they could not otherwise all be self-financing from user charges, and the agency must effectively re-distribute funds.)

Schematic of Fund Allocation Agency


Federal Government
Federal Fuel Tax
Fund Allocation Agency
Provincial Government
Provincial Fuel Tax
Provincial Licence Fees
Users
Municipal Government
Representation in Management Decisions ⟶
Funding ········→

The government's policy of commercializing transport infrastructure has been innovative and creative. The Panel believes that bold steps are now warranted to make the shift to more commercial management of roads. With the current division of responsibilities and charging procedures, intergovernmental co-operation is essential in designing solutions. The Panel's proposals show how the necessary agreement might be reached, and we encourage all jurisdictions to examine them carefully.

Given systemic and institutional deficiencies, as well as projected increases in road use, the Panel believes that the parts of the road network that are commercially viable should be separated to permit funding and management by users. Roads that are not commercially viable (primarily local municipal and remote roads) would continue to need some direct government funding, but they too would benefit from separate management, use of objective evaluation criteria, and involvement of users in charging and spending decisions. The Panel's recommendations follow.

Recommendation 10.1

The Panel recommends that the World Bank/New Zealand concepts of road and transport funding and management agencies be adapted for Canada, including the following features:

- **users should pay for roads, by means of appropriate charges and fees;**
- **charges for roads should be based on costs imposed, differentiated so far as practical by nature of vehicle, type of road, and amount of congestion;**
- **managers of the road network should have responsibility for both charging and spending decisions;**
- **users should be involved in decisions on charges and expenditures; and**
- **alternatives to road spending in other modes should be allowed to compete for road funds.**

Notes

[1] Strictly speaking, these measures of road length are in 2-lane-kilometres, rather than route-kilometres. Figures are from Fred Nix, "Alternative Road Financing Arrangements", paper prepared for CTAR, March 2001; and Transport Canada, *Annual Report 1996*, Chapter 7.

[2] To put this number in perspective, it is more than four times the distance to the sun *daily*.

[3] By federal regulation and industry convention, a variety of small vehicles used exclusively or mainly for private passenger purposes are classified as 'light trucks', including passenger vans, multi-purpose vehicles, sport utility vehicles, and pick-up trucks. For brevity, we use 'car' to include all vehicles used for such purposes and 'truck' to mean all vehicles carrying freight.

[4] Conference Board of Canada forecasts, quoted in TAF Consultants, *Freight Transport Trends and Forecasts to 2015*, report for Transport Canada, March 2000.

[5] See U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, annual.

[6] City-specific growth forecasts quoted in Lehman and Associates, "Potential Use of Abandoned Rail Corridors for Regional Rail Purposes", paper prepared for CTAR, April 2001.

[7] TAF Consultants, *Freight Transport Trends and Forecasts to 2015*, report for Transport Canada, March 2000.

[8] Some road expenditures, such as policing, or the enforcement, safety and policy work in provinces with provincially owned automobile insurance companies, are not captured in this figure.

[9] The amounts quoted are for the taxes that generate 'special', or incremental, revenues from road fuels, that is, in excess of normal sales taxes that would be received from spending on other goods. For the same reason, only the federal excise taxes on fuels are included, not the GST, as the latter does not generate incremental revenues.

[10] Road spending by level of government is more complex than represented here and not reported in any single set of accounts that makes it clear which level pays for which roads. It seems probable that some provincial and territorial governments are also spending considerably less than they receive in fees and taxes and that local taxes are paying a larger proportion of total road costs.

[11] With current equipment and load factors, Canadian intercity rail provides no emissions advantage over private vehicle use, although there is presumably some gain in congestion reduction in larger cities at peak times. See Chapter 17.

[12] F. Nix, M. Boucher, B. Hutchinson, "Road Costs", *Final Report of the Royal Commission on National Passenger Transportation*, Volume 4, pp. 937–1058, Ottawa, 1992.

[13] Academic research suggests that congestion charges on highways would provide both the signal for investment and the funds to undertake it. See K. Small, C. Winston, and C. Evans, *Road Work — A New Highway Pricing and Investment Policy*, Washington, D.C., Brookings Institution, 1989; and D. Newbery, "The case for a public road authority", *Journal of Transport Economics and Policy* 28/3 (September 1994), pp. 235–253. In a practical management system, respecting current jurisdictions, only the sections of intercity highways through cities would be included in a 'highway' management system, and congestion charges on those sections could legitimately be added to highway investment funds. Other city roads would be managed by city authorities, which would need to decide how to use congestion charges.

[14] See particularly I. G. Heggie and P. Vickers, "Commercial Management and Financing of Roads", *World Bank Technical Paper No. 409*, Washington, D.C., 1998; and K. M. Gwilliam and Z. Shalizi, "Road Funds, User Charges and Taxes", Report TWU-26, Washington, D.C., World Bank, 1997.

[15] See Hickling Lewis Brod Inc., "Highway User Benefits Analysis of the National Highway System", National Highway Policy Update Project, Council of Ministers Responsible for Transportation and Highway Safety, September 1998.The reported benefits approach $30 billion using a discount rate of 5% annually, but only about $18 billion using a rate of 10%, which continues to be the rate recommended by the Treasury Board Secretariat as the test rate for government investments.

[16] This was the conclusion of re-analysis of the initial proposal in ADI Limited, "Analysis of National Highway System Proposals", Report RR-12, Royal Commission on National Passenger Transportation, Ottawa, 1992.

[17] This seems clear from current revenues compared with spending, but also because the network would be able to exploit its monopoly. Agencies should be mandated to charge based on principles of efficiency.

[18] See Department of Finance, *Report of the Technical Committee on Business Taxation*, December 1997 (the Mintz Committee).

[19] See Transportation Table, National Climate Change Strategy Development, *Transportation and Climate Change, Options for Action*, Transport Canada, November 1999.

[20] In this the Panel agrees with the conclusions of the Mintz Committee that existing taxes should be replaced with more broadly based environmental charges.

Chapter 11
Ferries, Intercity Buses and Passenger Trains

In its submission, a group of four bus industry associations called on the Panel "to consider whether the government has formulated an all-inclusive, well-defined vision and strategy for [passenger] transportation in Canada." More than a decade ago, the government of the day acknowledged the absence of a coherent national passenger policy in appointing the Royal Commission on National Passenger Transportation. Many of the Commission's recommendations have been implemented, and the federal government continues to support the passenger system in various ways, but a national passenger policy has not been enunciated.

This chapter reviews the status and subsidization of ferries, intercity buses and intercity passenger trains. The federal government provides (or until recently provided) financial support for passenger travel and infrastructure under a variety of circumstances. Support includes the provision and subsidy of railway passenger and ferry services, airports and a few federal roads and bridges. Provincial and municipal passenger subsidies go to intercity rail, some ferries and airports, a few intercity and rural bus services, and urban transit. To the extent that attributable revenue might not cover the cost of roads used by automobiles — and this is particularly the case for remote areas and less used roads — that infrastructure and mode are also subsidized.

The Canadian passenger sector has matured substantially, and federal subsidies of passenger travel are a small fraction of the level that prevailed a decade ago. The deficit on passenger services provided by VIA Rail has been halved to $170 million annually, the number of federally subsidized ferry services has been drastically reduced, and airport divestiture has been the rule. For the most part, subsidy is now restricted to ensuring accessibility for uniquely remote communities.

The Panel is impressed by the improved efficiency and cost recovery orientation of the services the government has continued to operate, and by the extent to which costly and dated operations have been replaced by more effective and economical modes and institutional arrangements.

The Panel recognizes that funds available to subsidize passenger travel are limited and that requirements for and relative benefits from government support have been shifting. For example, while a more mature aviation sector should now be better able to support itself and thus require less subsidy, other low-density passenger services require subsidy. The Panel therefore believes a mechanism is needed for disciplined periodic review of the cost of and the social and economic benefits from existing passenger subsidies and other candidates for subsidy.

There is also the question of an appropriate institutional mechanism or mechanisms to implement the review and reallocation processes. The Panel suggests that some subsidized passenger services could be devolved from the federal government, with a negotiated initial transfer of funds and subsequent funding from the roads and transport funding agencies proposed in Chapter 10. Decisions about the mode to be used, service levels and even carrier selection would likely achieve better results if local and regional interests participated more directly than is now the case.

Ferry Services

Trends and Current Status

There are more than 200 ferry routes in Canadian waters, including domestic and international services. Major Canadian ferry operators carried approximately 39.2 million passengers and 15.3 million vehicles in 1999, only marginally higher than in 1989. On a regional basis, ferry traffic is higher in the West, mainly because of the presence of Canada's largest ferry operator, BC Ferries, which transported 54% of the country's passenger traffic and 51% of vehicle traffic.

Industry Structure

The federal government, largely through the medium of Marine Atlantic, had long supported ferry services in Atlantic Canada. During the late 1990s, however, change was dramatic:

- Ferries along the south coast of Newfoundland were transferred to the province and then substantially reduced. Federal funds provided were available to improve the road system and satisfy other provincial priorities.
- Federal subsidy of ferries to and within Labrador was reduced and substantial savings achieved when the government of Newfoundland and Labrador assumed responsibility for ferry services to Labrador, in

exchange for a one-time grant of $340 million. Part has been invested in the new Trans-Labrador Highway.

- The federally provided ferry service to Prince Edward Island was replaced by a toll bridge operated on a commercial basis to cover operating costs (with capital payments from federal funds). Transit times and convenience were substantially improved. The ferry vessel was sold to a private operator that now uses it to provide another service in Atlantic Canada.
- Two Marine Atlantic ferry services were transferred to the private sector. Bay Ferries Ltd. now operates those routes — Digby, Nova Scotia, to Saint John, New Brunswick, and Yarmouth, Nova Scotia, to Bar Harbour, Maine.

West coast ferry services, delivered by BC Ferries, are subsidized in part by the federal government in the form of an annual grant to the province of British Columbia (currently $22 million).

Since 1997, the government has been able to reduce subsidies substantially while maintaining service to travellers — and in some cases even improving it. Some operators of now commercialized ferry services have been able to deliver them at a lower (subsidy) cost to the government and have increased ridership and reported some profit.

Most of the remaining subsidies are to the services between Newfoundland and Nova Scotia, for which — at least for the main year-round route — there is a constitutional obligation.[1] Nevertheless, it seems likely there are opportunities to inject further entrepreneurship and innovation into these services as well (through tendering, for example, including consideration of alternative routings). The Panel suggests such possibilities should be explored.

Recommendation 11.1
The Panel endorses initiatives to reduce subsidies to ferry services and recommends that commercialization and divestiture of responsibility for local service decisions to other levels of government continue.

Intercity Bus Services

A carrier whose operations extend beyond the bounds of a single province or territory is considered an extra-provincial bus undertaking and falls under federal jurisdiction; however, the provinces have been delegated authority to regulate these operators under the *Motor Vehicle Transport Act, 1987*. The extra-provincial (i.e., intercity) bus industry is subject to varying degrees of economic regulation, depending on the province or territory.

Resolving the regulatory fragmentation characterizing the inter-city bus industry is hampered by the divergence of views among jurisdictions and industry on appropriate public policies. In April 2001 the Minister of Transport referred a set of questions about the intercity bus industry and its regulation to the Standing Senate Committee on Transport and Communications. The Panel did not want to duplicate the Committee's work, but ignoring the bus mode would have left a conspicuous hole in the consistent approach to transport policy the Panel recommends. Bus industry representatives made submissions and appeared before the Panel, urging members to recognize the importance of the bus mode and to consider the modal and intermodal issues affecting the future of the industry.

Regulating the Intercity Bus Industry

The key questions posed by the Minister of Transport to the Senate Committee on Transport and Communications in April 2001 included:

- Is economic regulation of the industry still appropriate? Should some or all of the industry be deregulated now, or at some point in the foreseeable future?
- Are the differences between the provincial bus regimes that have developed over the last decade detrimental to the industry and/or the travelling public? If they are, what is the appropriate remedy? Which level of government should implement it?
- Is the traditional scheduled bus industry the appropriate tool for providing public mode rural and small community service? What alternatives are available? Which public policy would best support rural and small community service?
- What are the prospects for reversing the long-term decline in scheduled bus ridership?
- What has been the impact of the industry consolidation over the last decade? Is this apparently continuing consolidation of the industry an issue requiring government attention?
- What is the role of the bus industry in Canada's overall strategy for dealing with environmental issues relating to transportation?
- Is there a need for changes to national motor carrier safety standards to reflect bus industry safety needs?

Policy Issues

A federal policy initiative to create a harmonious national regulatory regime for intercity bus would almost certainly gravitate to a choice between

- the status quo delegation and continuing provincial regulatory autonomy, possibly with pledges to negotiate voluntary harmonization through a permanent federal-provincial consultative body or other multilateral process; or
- a chain of actions amounting effectively to federal removal of market (route) entry and pricing restrictions, although probably with measures requiring that public bus carriers meet minimum safety, ability and performance standards.

The Panel decided not to offer a recommendation about whether the *Motor Vehicle Transport Act, 1987* should be amended to remove or ease regulatory constraints on intercity bus market entry. This is effectively the central question the Minister asked the Senate Committee to examine, and the Panel will not pre-empt its answer. Should the government decide to take this step, however, the Panel offers some observations relevant to the debate.

In their submissions, the intercity bus industry and the provinces expressed various concerns about deregulating intercity bus. Should deregulation proceed, the Panel's recommendations with respect to other modes, and for roads and passenger transportation generally, would resolve or alleviate these concerns:

- Some provinces were concerned that, without cross-subsidy from profitable routes, low-density bus markets would lose service. These services could be within the mandate of the new provincial/territorial roads and transportation funding and management agencies the Panel recommends be established. Bus services (existing and new) that delivered valuable social benefits by providing rural access would be eligible for funding on the basis of appropriate criteria set by these agencies.
- Representatives of the intercity bus industry indicated their concern that a coherent Canadian passenger transportation policy was lacking and, in particular, that they were subject to the vagaries of competing with a subsidized rail service. The Panel's recommendations on roads and transport policy, as well as commercialization and full cost recovery for

VIA Rail's services, should ensure that future bus/rail competition will be on a much more equal basis.

- Concerns that relaxing controls over competitive access to bus routes could lead to abuses are addressed by the simple carrier licensing process the Panel suggests and the implied requirements for safety and financial fitness; route, fare and schedule transparency; and adequate notice of route abandonment or schedule change.

The regulatory fragmentation facing the bus industry is clear cause for concern.

Recommendation 11.2
The Panel recommends that the Minister of Transport continue the process already initiated to address regulatory fragmentation in the bus industry.

At the same time, the Panel believes that safety must not be compromised.

Recommendation 11.3
The Panel recommends that the National Safety Code be structured such that all vehicles carrying paying passengers are subject to a consistent pattern of safety regulation that takes into account the scale of the operation and risk exposure but does not rest entirely on vehicle size.

Finally, the Panel notes that all this can be achieved without changing the delegation of regulatory powers to the provinces.

Intercity Passenger Rail Services

Intercity passenger rail is in long-term decline. Globally, few rail services remain truly profitable, and the proceeds from them are often used to cross-subsidize others that are not. Many of the world's rail passenger services have been discontinued. In some cases their continuation can be attributed to inertia, but in other instances passenger rail has been retained, or new or improved rail services instituted, by deliberate decision.

The development of high-speed rail is an impressive technological achievement. In Europe and Japan high-speed ventures have been considered successful even where revenues cannot provide an economic return on their capital cost. At least implicitly, the value of consequent reductions in air and road congestion and other external environmental and social benefits is deemed to exceed the financial (subsidy) cost.

Most of Canada's intercity rail services are provided by the federal government through VIA Rail Canada. Other substantial public and private sector passenger services are offered by four Class II carriers — BC Rail, Ontario Northland, Algoma Central, and the Quebec North Shore and Labrador Railway (the latter three still receiving federal payments to cover their costs). A different style of service is provided on a fully commercial basis by Rocky Mountaineer Railtours Ltd.

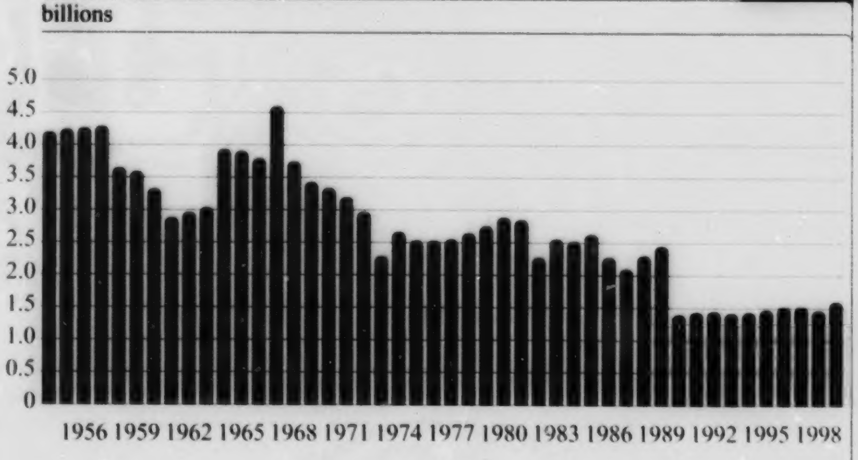
In 1999, rail passenger traffic amounted to just over 4.1 million passenger-trips. VIA Rail carried almost 92% of these passengers; the Class II carriers transported the rest.[2] In 2000, VIA carried 3.95 million passengers, generating revenue of more than $240 million — an increase of 9% over 1999.[3] VIA's 72 locomotives and 309 passenger cars operate 462 trains a week.

Intercity rail use has declined substantially from the middle of the last century, with increasing car ownership and the development of aviation. Funding cuts to VIA Rail in 1990 are responsible for the large drop in passenger-kilometres; since these reductions ridership has risen slowly. Figure 11.1 demonstrates this overall general decline between 1954 and 1999.

Over the period 1990–2000, VIA increased revenues by 69% and ridership by 20% and improved its revenue/operating expense ratio more than twofold.

Intercity Rail Passenger-Kilometres 1954–1999

Figure 11.1



Source: Statistics Canada 52-216.

Over the same period, government operating funding (excluding capital) was reduced from $410 million to $170 million, a decline of 59%.[4]

VIA uses a yield management system to allocate available seat inventory to various fare plans in a way that maximizes revenue. Using this strategy between 1990 and 2000, VIA reports a yield growth of 36%. Over the same period, total passenger revenues increased by 63%, while passenger miles increased by 20%.

VIA Rail's management has recommended legislation to improve its governance arrangements and more clearly articulate the government's passenger rail objectives. The Panel understands that giving VIA's management a longer-term commitment would allow the organization to plan more effectively and believes that such legislation should proceed as soon as the preliminary steps, outlined below, have been taken.

Under the Panel's proposal, each of the services now provided by VIA, and new services that might be assigned to it, would be evaluated along with other possible uses for the funds. Further, where feasible, service delivery should be awarded through a tender process that entertains bids involving any mode that could meet specified service parameters. (This might or might not incidentally limit proposals effectively to the rail mode.)

Canada's passenger rail services represent a thin shadow of the network that prevailed into the 1950s. Although rail used to be the choice of the cost-conscious longer-distance traveller, it has been unable to match transcontinental air fares for two decades. Now, VIA has great difficulty trying to match air fares on its moderate-distance service between central Canada and the Maritimes. This is a market that rail is bound to lose.

With air's greater speed and lower labour cost per passenger-kilometre, it is difficult to envisage this trend being reversed. For example, the Montreal-Halifax service might be successfully recast as a tourist experience or as local services competing with bus for travellers within the Maritimes and within Quebec, but it is unlikely that it will again become a force in the Montreal-Maritimes intercity market. Similar conclusions could be drawn for the western transcontinental service.

Rationale for VIA Rail Subsidies

The question of why intercity passenger rail that competes with commercial alternatives (air and bus) should be subsidized has not been addressed explicitly in government documentation of VIA funding decisions. Among the arguments advanced to support continued subsidy are environmental benefits relative to alternative modes, infrastructure cost subsidies received by private vehicles and intercity buses, and service to travellers with lower incomes. Available evidence does not support such claims.

The Royal Commission on National Passenger Transportation (set up mainly to resolve the future of passenger rail) concluded in 1992 that rail's system-wide cost per passenger-kilometre is three times that for private cars and more than four times the total social cost of intercity bus — even when estimates of the social cost of accidents and environmental damage, along with infrastructure costs, are included. Even for Montreal-Toronto, the rail cost was more than 50% greater than the car cost and more than triple the bus cost. While the exact valuations of social costs are open to debate, the conclusion is inescapable: subsidies cannot be justified by social cost differences among modes.

The Transportation Table of the National Climate Change Strategy Development process reported that intercity rail, system-wide, uses slightly more fuel and produces slightly more greenhouse gases per passenger-kilometre than intercity car and nearly five times as much as intercity bus.[5] The estimate for intercity car was 110 grams/passenger-kilometre, based on assumptions and modelling conducted for the Table.[6] For intercity bus, the estimate was 26 grams/passenger-kilometre. For intercity rail the report quoted an average of 123 grams/passenger-kilometre, based on published statistics for passenger train fuel use and passenger-kilometres in 1997.[7] Recent Transport Canada data suggest that the system-wide average was actually about 130 grams in 1997, and they allow an estimate for VIA's corridor services alone of about 118 grams per passenger-kilometre, still surprisingly worse than the intercity car estimate.[8] These comparisons reflect VIA's equipment and its average load factors, compared to much improved passenger car technology. Assuming about 70% of the average corridor car's seats are filled,[9] emissions per *seat*-kilometre would be about 80 grams. That would still be about triple the average for intercity buses, and it could also be achieved by intercity cars if their average occupancy rose to 3.

The income distribution of rail travellers can be inferred from Statistics Canada's household spending estimates: 40% of rail revenues are from households in the highest income quintile and just 7% from households in the lowest quintile.[10] Those in the highest quintile actually spend a larger proportion of their income on passenger rail than those in the lowest quintile.

Rail subsidies are therefore received disproportionately by higher-income households.

In support of subsidizing passenger rail, it should be noted that some services provide accessibility to persons and communities without practical travel alternatives. Also, because of the physical characteristics of rail vehicles, it is practical for rail to accommodate travellers with special needs more suitably and comfortably than aircraft or buses.

A Future for VIA Rail Services

Although some VIA trains serve more than one purpose, a forward looking analysis of Canadian railway passenger services might divide them into three categories:

- operations whose potential is mainly as a tourism product;
- services that provide access to remote communities; and
- those where rail's speed, comfort and amenities should allow it to fill a niche between its lower-cost bus and higher-cost air competitors in the *between-cities* market and to attract some additional ridership away from the private automobile, possibly including some congestion relief in the Quebec City-Windsor corridor.

Services with Tourism Potential

VIA created the Rocky Mountaineer tourist service in 1988. It was privatized following a financially successful year in 1989 and now shares the Alberta-British Columbia tourist market with VIA's intercity service. Rocky Mountaineer is a tourism product that goes far beyond a train ride through the mountains. Nonetheless, the presence of the public sector carrier in this market has given rise to assertions by Rocky Mountaineer Railtours that most of VIA's traffic base for its Edmonton-West Coast service, especially during peak summer months, consists of tourists, and that VIA has enjoyed access to CN and CPR lines at rates that are not fully compensatory.

If VIA were operating strictly a tourist service, it would be easy for the Panel to accept Rocky Mountaineer's assertion of unfair competition without qualification; however, VIA must move at least some local passengers. At the same time, it would not be surprising to find that VIA's Edmonton-Vancouver service had moved substantially toward becoming a tourist product. In this case its subsidy should be called into question.

Recommendation 11.4

The Panel recommends that VIA's current services be reviewed to ascertain the extent to which they have become tourism products; if they have, they should be designated as such.

A review would collect and consider data on travellers other than tourists and assess modal alternatives available to those passengers. Routes designated as essentially tourist routes should be commercialized (sold off, tendered to the private sector, or operated as a discrete business without subsidy) on the Rocky Mountaineer model. VIA, of course, should be able to compete on an equitable basis to provide such services. Tourist route designations would almost certainly include Edmonton-Vancouver and Victoria-Courtenay. Other candidates include all or part of Jasper-Prince Rupert. Montreal-Halifax and the Gaspé service might well be recast successfully as tourism-focused operations with changes in scheduling, equipment modifications and ancillary tourism services.

New rail tourism services should not be precluded. Toronto-Sudbury-Thunder Bay-Winnipeg, or part of it, could offer tourism prospects second only to Rocky Mountaineer operations. The scenery along the CPR line north of Lake Superior is spectacular, rivalling the Rockies. VIA does not run there now; it operates over the CN route to the north, where transcontinental service is combined with access to local remote communities.

Quebec City-Windsor Corridor

Some 85% of VIA Rail's passengers travel on the southern Ontario and Quebec network known as the Quebec City-Windsor corridor. Here, VIA competes essentially with air for longer-distance traffic between the larger cities and with bus to attract moderate- and shorter-distance travellers. Market shares among the public carriers (i.e., excluding private vehicles, the most commonly used mode), as provided by VIA in its submission, are as follows:

Selected City Pairs	VIA (%)	Air (%)	Bus (%)
Montreal-Toronto	29	63	8
Ottawa-Toronto	22	63	15
Toronto-Windsor	39	39	22
Montreal-Quebec City	25	13	62
Montreal-Ottawa	31	7	62

The bus industry in particular expressed concern that subsidized passenger rail, especially in the corridor, constitutes unfair competition.

In its submission, VIA told the Panel that $176 million of the $402 million in new capital monies from the government will be invested in growth (expansion of service). Investments will include upgrading infrastructure and acquiring new rolling stock to permit additional train services. In the Quebec-Windsor corridor, VIA's plan calls for hourly or close to hourly service in major markets, faster trains and more express trains. Increases in the number of daily trains will range from 25% (Windsor-Toronto and Montreal-Quebec City) to 60% (Ottawa-Toronto). Clearly rail will emerge as a stronger competitor in the corridor, and at least the shorter-term effect of this on the private sector bus industry is disturbing. Yet, this may be a practical necessity if the rail operation is ever to rise beyond its current uneconomic status.

In terms of cost recovery, VIA anticipates that these investments will result in a 25% increase in the number of trains, a seat capacity increase of 40%, and a ridership increase (passenger miles) of 38% by 2006. In the same period, VIA projects revenue growth of 70% — 22% from basic market growth and 40% as a result of new train services and growth initiatives.

The Panel is concerned that, unless the rail bed, rolling stock and operating practices are improved to permit higher speed of operation in the corridor, the services will remain uneconomic. We urge the government and VIA seriously to review any future proposed investments in the light of the following recommendation.

> **Recommendation 11.5**
> **The Panel recommends a full cost recovery policy for Quebec City-Windsor corridor rail and its commercialization.**
>
> **As a first step, corridor operations as a whole should be separated organizationally from VIA's other services. Management should be directed to pursue commercialization and to report cost recovery progress for each of the corridor services on a fully allocated basis. Management should be given full authority to terminate services that prove unsuccessful.**

The corridor operation will succeed only with continued focused management. Other possibilities include divestiture of uneconomic services, leaving a smaller corridor operation. Should it not prove possible to maintain the full existing corridor network as a viable commercial system, however, a successful and profitable though smaller corridor carrier would still be an outcome the government could view with pride.

Recommendation 11.6
The Panel recommends that, after Quebec City-Windsor corridor services have been separated from the other routes that VIA Rail now operates, legislation be enacted to give the entity providing VIA corridor services the commercial freedom required to become and remain self-sufficient.

Services to Remote Communities

VIA Rail operates a number of services that have been retained because they provide access for communities that lack practical alternatives. In other instances, such as the transcontinental trains west of Capreol (near Sudbury), remote community service is provided essentially as a by-product. The general criterion used to define 'remote' is lack of an all-weather public road connection to the continental highway system. The companion criterion is, of course, the presence of a rail line with historical passenger service. In many instances the communities concerned are very small. The only substantial centre involved is Churchill (population 800 in winter, 1200 in summer). In some cases (such as Churchill) communities have effective scheduled air service. Some are accessible only by helicopter and float/ski plane.

There is no formal definition of what constitutes adequate accessibility for remote communities, but governments have established a pattern of giving communities access to medical, educational and other services on a less than cost recovery basis as necessary. Some continued subsidy of rail service to remote communities is essential. The pertinent questions are what level of subsidy is reasonable and whether there are more economical means of providing adequate accessibility.

VIA Rail's service-specific cost and revenue data are considered confidential. Using 1990 data, however, the Royal Commission on National Passenger Transportation reported subsidies ranging from $0.78 to $11 per passenger-kilometre, with an average of $1.44.[11] Operating cost recovery ranged from 2% to 10%, with an average of 7%. The remote service for which the Royal Commission reported $11 per passenger-kilometre has since been terminated. This would change the subsidy range $0.78 to $3.45, with the latter figure representing Sudbury-White River. Cost recovery may have improved since 1990, but the subsidies no doubt remain substantial.

The Panel did not investigate the specific circumstances of VIA's remote services in sufficient depth to render an opinion on whether further service cuts should be considered. One observation is possible, however. Transportation has developed a great deal since subsidized remote rail services were established. Air travel is relatively more available and affordable. A large number of roads have been built, including logging roads that could provide access to some communities presumed to depend on rail.

Recommendation 11.7
The Panel recommends that each rail service now subsidized to provide access to remote communities be reviewed to determine

- **the present level of remoteness;**
- **whether a federal contribution toward development of road access (by the province in question) might constitute a more effective and efficient solution to the access issue;**
- **whether an air, bus or other service, provided by the private sector, might prove superior to rail; and**
- **whether the private sector could provide an adequate rail service more economically under contract than is possible for VIA Rail.**

Clearly the relevant provincial governments should have major input in these decisions, as should the other parties concerned. The Panel believes there is an opportunity for more rational comparison of subsidies for remote services with alternatives to those services — and more general comparisons with provincial priorities for transport spending — if responsibility for and funding of remote services were passed to the provinces. The Panel's proposals in Chapter 10 included the potential to transfer this responsibility to the recommended provincial/territorial roads and transport funding agencies.

The Panel believes these innovations in passenger rail service could be implemented independently of our recommendations in other modes. However, with the proposed provincial/territorial roads and transport funding agencies, a more integrated solution to passenger rail services would be possible. This might include devolution of intraprovincial services to the relevant provinces. Subsequent decisions on the future of the services and of modal alternatives would then be the responsibility of the province concerned.

The Panel also suggests that continued subsidies to VIA's commuter services, or even long-distance corridor services, could be justified now — and possibly to a greater extent in future — by their ability to reduce or avoid congestion costs associated with private vehicle use. As alternatives to providing road capacity, proposals for such support should also be eligible to compete for funds administered by the proposed funding and management agencies.

> **Recommendation 11.8**
> **The Panel recommends that the policy of commercializing passenger services, including divestiture to the private sector and other levels of government, continue. Further, where federal subsidy of passenger travel is deemed desirable, federal financial support should be reassessed periodically and carrier- and mode-neutral mechanisms to allocate the subsidies in a manner that least distorts the commercial market should be used.**

Notes

[1] It has also been suggested that the obligation might eventually be superseded by provision of a fixed link between Newfoundland and the mainland, across the Strait of Belle Isle, when warranted by traffic volumes.

[2] Transport Canada Annual Report, 2000, p. 155.

[3] VIA Rail, "VIA's Pricing Strategies", submission to CTAR, April 2001, p. 1.

[4] VIA Rail, submission, p. 6.

[5] Transportation Climate Change Table: *Transportation and Climate Change: Options for Action*, Transport Canada, November 1999, Table 2.6.

[6] The modelling accounted for both passenger cars and light trucks, at plausible fuel consumption rates and occupancies: Some 69% of intercity use was estimated to be by car, using 8.4 litres/100 km, with an occupancy of 2.1 persons/vehicle, with the remaining 31% by light truck, at 11.6 litres/100 km and 2.2 persons/vehicle.

[7] Statistics Canada, cat. no. 52–216, 1997.

[8] Fuel and passenger-kilometre figures from Transport Canada, Economic Analysis Directorate, April 2001. Figures for 2000 show essentially the same system-wide and corridor fuel use and emissions per pass-km.

[9] VIA's load factor for the corridor is not published, but a system average of 59% is reported in VIA Rail Canada, *1999 Annual Report.*

[10] Statistics Canada, "Detailed Average Household Expenditure by Household Income Quintile", in *Survey of Household Spending*, 1997, 1998, 1999, 2000. The average for 1996–1999 is cited.

[11] Volume 1, p. 268, Table 12-5.

Chapter 12
The National Interest in Urban Transportation

The Panel's terms of reference mention urban public transport only obliquely, in directing the Panel to consider "the advisability of specific measures designed to preserve urban rail corridors for future mass transit use in the rail line abandonment process".

The Panel sees urban areas as a source of major transportation problems and urban transit as a key component of a comprehensive multi-modal transport policy. The research program therefore included consideration of transit operations, management and financing and its value as an alternative to private car use, along with an assessment of urban rail corridor preservation. The latter issue is discussed in Chapter 13; this chapter considers the status and future of urban transit.

Roads and the automobile are the primary means of urban transportation, and motor carrier (vans and trucks) is the principal method of freight delivery in urban areas. The dominance of motor transport is not likely to change. Road use may be restrained somewhat in response to environmental and congestion concerns — and especially in response to pricing strategies — but it will remain the dominant mode.

With the goal of moving people and goods efficiently, moving cars and trucks is a major part of urban life — and how well they move affects the economic and social well-being of cities. The federal government does have an interest in the economic health and functioning of Canada's urban engines of growth. There are policies and investments to manage vehicle flow; these are mainly the responsibility of urban and regional governments and the choices made by their residents. The proposed roads and transport funding agencies, discussed in Chapter 10, would play a key role here. There are also some opportunities for direct federal involvement in urban motor transport: conducting or sponsoring research and development with relevance to all urban regions, such as intelligent transportation systems, and promoting harmonization of technologies such as those for road pricing. The federal government also has environmental and safety responsibilities that directly affect urban vehicles. For the most part, however, this chapter concentrates on urban transit and possible roles for the federal government with regard to this mode. This reflects submissions to the Panel and the terms of reference.

The most pressing policy concern appears to be future funding. As with several other transport issues, however, the Panel sees important underlying questions about how urban transit should be integrated with the rest of urban transport in its delivery, pricing and investment.

Urban transit's vital role in major cities is threatened by several factors. Planning and infrastructure policies that serve car travel, along with stringency in public funding for transit, certainly pose a threat. In addition, some well intentioned transit support policies and inertia in transit management have also been factors.

Transit has become an anomaly in transport policy. Governments at all levels have generally sought to liberalize entry to transport markets, reduce price regulation, and inject a measure of enterprise in publicly owned carriers and infrastructure, yet urban transit is still delivered almost exclusively by municipal agencies. Further, while governments have tried in other transport modes, and in other fields, to make users responsible for the cost of services, urban transit is still funded mainly through direct subsidies.

Transit service levels, fares, and subsidy amounts are decided by local or provincial elected officials. If transit services across the country are considered together as a separate mode, they receive by far the largest direct transport subsidy of any mode. Subsidies have grown quickly in recent decades and must continue to do so if the plans of cities and their transit agencies are to be met.

Clearly these decisions are not made lightly — and they are usually made with a commendable degree of consultation with transit users and taxpayers. The current status of urban transit reflects a mutual agreement that transit is a necessary exception to general policies of user pay, that services are essential and worth their large subsidies, and that their delivery by government is appropriate. At issue for the Panel was how the principles of an integrated national transport policy could be extended to guide future transit decisions and what their implications might be.

Trends and Current Status

Travel by public transit has recently totalled an estimated 14 billion passenger-kilometres a year, or about 2.5% of total national passenger travel and about 5% of urban passenger travel.[1] The latter figure obviously shows an overwhelming preference for car use, which provides the other 95% of urban passenger-kilometres. But it also reflects the fact that transit is by no means available to all Canadians — less than 60% live in communities served by transit — and that only a much smaller proportion of all trips could be taken by transit instead of private car.

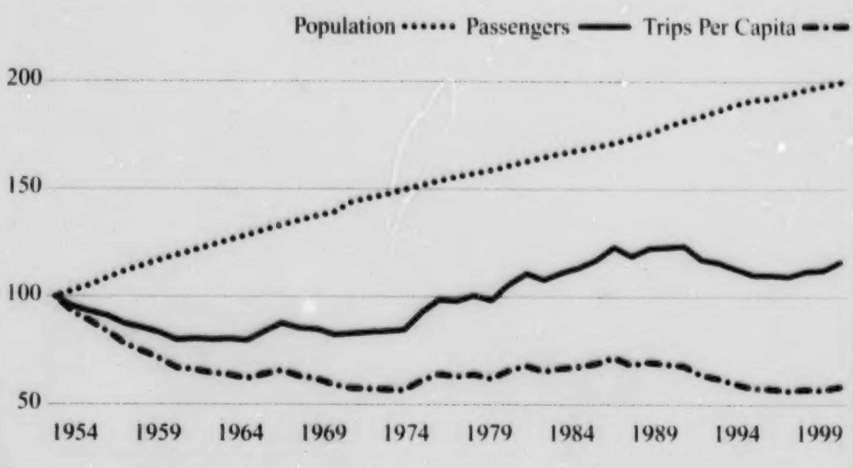
At the same time, the figure conceals the much greater importance of transit in larger city centres and during peak times. Transit carries an average of about 4 million passengers daily, including more than 1 million in Toronto, close to 1 million in Montreal, about 400,000 in Vancouver and 200,000 in Ottawa and Calgary. As those are mostly trips to and from city centres, they represent major reductions in what would otherwise be needed by way of urban arterials and expressways, with their associated infrastructure costs, congestion and environmental impact.

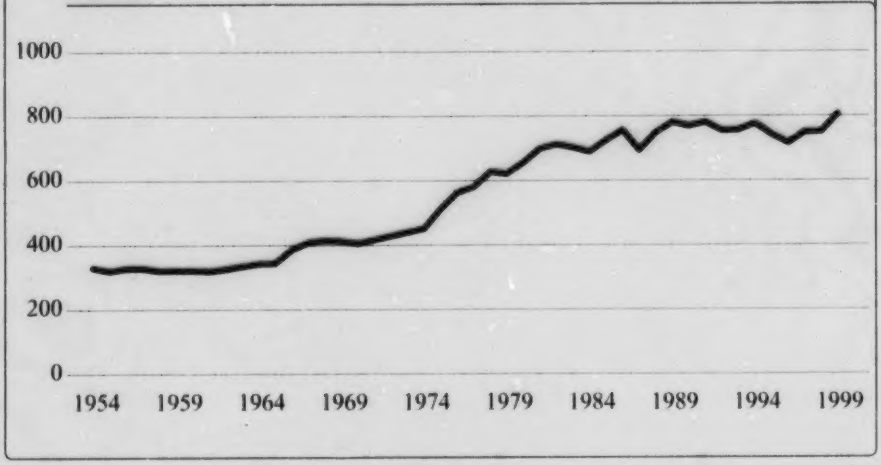
Transit has been fighting a losing battle with population dispersal and motorization for a long time. Figure 12.1 illustrates relative trends in population, transit passengers and passengers per capita from 1954 to 1999. The number of transit passengers was falling at the start of that period, then grew by 50% from 1960 to 1990, and has subsequently declined again,

Transit Trips and Population Trends 1954–1999

Figure 12.1

indices, 1954 = 100





Transit Vehicle-Kilometres 1954–1999

millions

though with some growth since 1996. In 1999, the total was about 16% higher than in 1954. However, during those 45 years, the population doubled, growing steadily throughout. Trips per capita consequently fell substantially overall, by more than 40% over the period, though there was actually an increase of about 25% from the mid-1970s to mid-'80s. In 1999, the number of annual transit trips per capita was about 47, less than one trip per person per week.

Figure 12.2 shows a radically different trend. As measured by vehicle-kilometres, total transit service remained roughly unchanged until the mid-1960s, but then doubled by 1981 and continued to rise through the 1980s, to a level nearly two and a half times that of the early '60s. This illustrates municipal and provincial policies of extending transit services to residents of new suburbs and their serious attempt to win passengers from private cars to transit during the '70s and '80s — just how serious can be judged by the increase in subsidies, from less than $100 million annually in the early '70s to more than $1.5 billion in 1989 (in constant 1998 dollars).

From 1989 to 1999, service (vehicle-kilometres) remained roughly constant, but trips per capita declined by about 15%. Transit companies have been heartened by the slight growth since 1996, but this was a period of rapid employment growth, and transit has been shown to be very sensitive to employment cycles in the past. The growth also appears to have been mostly in the fast-growing western cities, particularly Calgary and Vancouver, while ridership in Toronto, Montreal and Ottawa remains ominously below the levels of a decade ago.

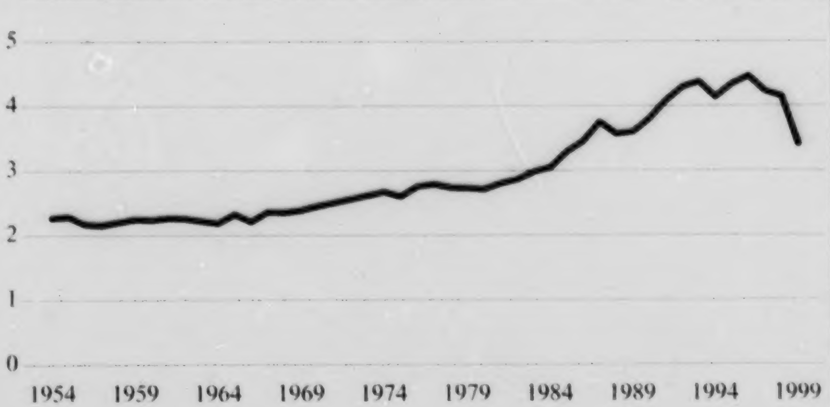
Annual subsidies also continued to increase through most of the 1990s, reaching $2.4 billion in 1998 before declining slightly to $2.2 billion in 1999. Fare-box revenues through the 1990s met about half of operating expenses nationally and a smaller proportion when capital expenses are included.[2] Transit agencies claim, justifiably, that this is greater than the norm in the U.S. — where transit is losing the fight against motorization to an even greater extent — and greater even than in some European countries, where transit plays a larger role. The figure for the country's largest transit system — the Toronto Transit Commission — is an impressive 80% of operating costs, while that for GO Transit exceeds 90%.[3]

Long-term trends in transit costs and productivity raise some serious concerns, however. While unit costs of most transport carriers have declined over time with productivity improvement and increased load factors, transit operating costs (excluding capital purchases) per vehicle-kilometre have doubled (in constant dollars) since 1975, as shown in Figure 12.3. The attempt to retain and expand ridership through improved service involved more expensive buses, trains and track with higher operating costs (including dedicated light rail and busways). Figure 12.4 shows the trend in costs per passenger, which increased even faster, nearly quadrupling over the period (again in constant dollars) as the number of riders per vehicle fell with expanded service

Transit Cost per Vehicle-Kilometre 1954–1999

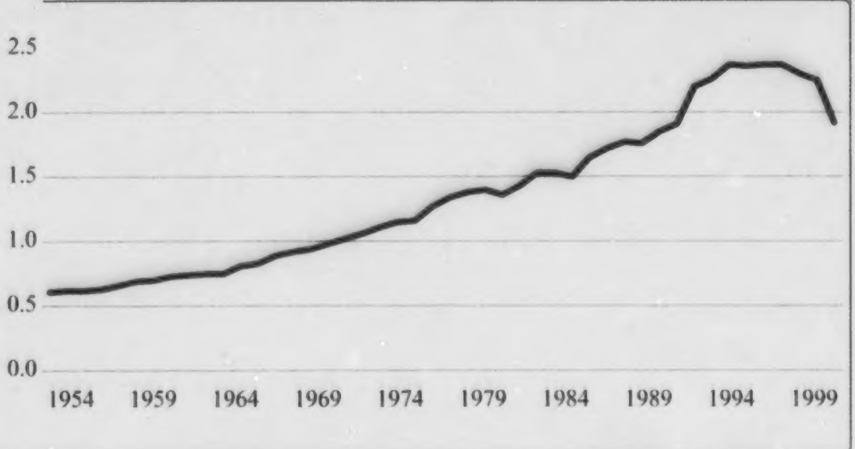
Figure [illegible]

constant 1995 $



Transit Cost per Passenger 1954–1999 [illegible]

constant 1995 $



frequency and coverage — such as lower-density suburbs. Labour cost increases also played a role throughout the period.

The situation began to change substantially in the most recent years. Fiscal stringency in provincial and municipal governments included reductions in transit subsidies — and notably the Ontario government's transfer of funding responsibility to regional and local governments. National financial accounts to demonstrate the reductions are not yet available, but submissions to the Panel suggest that nationally, total subsidies fell in 1999 and subsequently.

Figures 12.3 and 12.4 show sharp declines in costs per vehicle-km and per passenger since 1996. This no doubt reflects some improvement in operational efficiency, but a caution must be added: transit agencies (through the Canadian Urban Transit Association) estimate that capital replacement of $3.2 billion has been deferred and is needed immediately to maintain service levels. They also estimate that a further $1 billion in excess of current funding levels will be needed over five years to meet anticipated demand.

Transit operators and advocates told the Panel they are confident that ridership can be increased through expanded service, particularly investment in light rail or dedicated busways. They argue for lower fares, through increased subsidies, specifically proposing a federal tax exemption for employer-provided transit passes, to match the treatment of employer-provided parking (which is technically a taxable benefit, but usually not enforced as such).

They also advocate direct federal participation in transit funding. The government has provided no such funding in recent years, though Transport Canada managed a small-scale Urban Capital Assistance Program during part of the 1970s and '80s and has provided some minor funding for transit vehicles using alternative fuels and larger amounts intermittently from special funds. Transit infrastructure could be eligible for funding under the present Canada Infrastructure Program, though its announced priorities are for water systems and energy efficiency (under which, curiously, transit does not qualify[4]).

Transit operators, supported by the Transportation Association of Canada in its *Vision for Urban Transport*, now argue for a much larger federal commitment, solely to transit. They suggest the government should share routinely in funding transit capital, by dedicating revenues from road fuel taxes. U.S. federal assistance provides a model, they suggest: US$6-7 billion a year (20% of revenues from fuel taxes and vehicle fees dedicated to the Highway Trust Fund), is being allocated to transit capital investments. Canadian operators propose a range of 2 to 4 cents per litre, which at current fuel consumption rates would raise revenues of about $1–2 billion annually.

Current Subsidy Policies

Subsidy policy varies substantially among jurisdictions.[5] Five provinces (Newfoundland and Labrador, Prince Edward Island, New Brunswick, Nova Scotia, Saskatchewan) and all three territories do not provide routine capital or operating subsidies directly for transit, so all subsidies are municipal.

Further, the province of Ontario announced cessation of any new provincial funding of capital or operations in 1999, passing the full responsibility to regional and municipal governments. In that year, total regional or municipal subsidies in Ontario amounted to $1.1 billion.

In the other three provinces with major transit systems — Quebec, Alberta and British Columbia — although municipalities continue to provide half the subsidy or more, the provincial government has recently adopted innovative approaches to transit funding for cities, described in the next few pages.

Quebec — Montreal

The province dedicates a surcharge of 1.5¢/litre of fuel sold within the territory and $30/vehicle registered to a provincial authority, the *Agence métropolitaine des transports* (AMT), to fund regional transit agencies. AMT also has authority to levy a surcharge on parking but has not yet done so.

Quebec — 6 other cities

The province transfers revenues from a $30/vehicle surcharge in each city's region for transit use.

British Columbia — Vancouver

The new regional transport agency, TransLink, has authority to operate and fund transit and most roads in the region (except provincial highways) and receives from the province 8¢/litre of fuel sold in the region (rising to 10¢ by 2005). TransLink also has the power to levy direct charges on motorists in the form of annual vehicle fees, parking surcharges, or road tolls, but has not yet done so. Its recent proposal for annual vehicle fees ($40–120 for cars and an average of $190 for commercial vehicles) has been rejected by the province (which would have had to collect them).

British Columbia — Victoria

The province transfers to the transit agency 2.5¢/litre of fuel sold in the city.

Alberta — Edmonton and Calgary

The cities receive grants from the province calculated on the basis of 5¢/litre of fuel sold within their territory.

The novel features that particularly interest the Panel in its search for an integrated strategy include the following:

- All are based on deliberate transfers from motorists to transit, replacing payments from general revenues.
- Only motorists within the territory served are charged, when payments from general tax revenues imply transfers from taxpayers elsewhere, who cannot choose to use the services.
- All involve some form of dedicated provincial revenues, giving some predictability of future funding.
- In the case of the two largest cities involved, Montreal and Vancouver, the new agencies have been given unprecedented authority to raise their own revenues by instituting new charges on motorists.
- In the case of Vancouver, the agency has responsibility for both transit and road use.

Benefits from Transit

The effects of transit in avoiding car use can be converted into dollar values by estimating the alternative amount of car traffic and comparing its total social costs to those of the transit traffic. As described in Chapter 10, the social costs include the cost of the resources used plus a value for external costs — congestion, accidents and environmental damage. Establishing dollar values for external costs is naturally contentious and uncertain, but research supplies plausible ranges that are used by many countries and agencies in official evaluations of transport investment projects.[6]

Analysis undertaken for the Panel suggests that the current extent of annual transit use brings benefits in social costs avoided of about $5 to $6 billion.[7] This suggests that current subsidies — in the range of $2.2 billion nationally — are producing a substantial net benefit. The analysis also compared this to evidence of the returns provided by urban highway investment projects, concluding that the transit subsidies produced greater benefits.

The analysts were careful to point out, however, that still greater benefits would be realized simply by charging all road users for the full social costs they impose, including both external costs and the cost of resources consumed. In fact, for greatest efficiency, this would be the only remedy needed. Transit subsidies become a solution only because direct road charges are not imposed.

This of course reinforces the Panel's arguments in Chapter 10 for a policy of charging for roads, with the implication that transit subsidies could then be reduced.

Measures to Increase Transit Use

Evidence of benefits from transit capital investments varies substantially. Researchers suggest that much of the capital-intensive investment in transit in the United States has been of doubtful value.[8] The availability of federal capital subsidies there, and the attempt to induce shifts away from cars with high-quality transit services, is judged to have encouraged capital-intensive projects. Further, ridership projections have often proved overly optimistic, so that the cost per new rider has been high.

That experience cannot be transferred directly to Canadian conditions, where transit is a much more accepted means of travel, and major investments have been made more to respond to increasing demand than to stimulate new demand. But the experience of recent decades — where rapid increases in transit delivery costs failed to arrest the long-term decline in trips per capita — raises questions about relying on service improvements alone to induce people to switch from cars to transit. Observers suggest that here too, the availability of capital subsidies has allowed transit agencies to adopt capital-intensive solutions, without supporting them with more cost-effective operational solutions — such as unpalatable restrictions on car use.[9]

Research and analysis conducted for the Panel came to the following interrelated conclusions:

- Urban sprawl reduces route density, making competitive transit service costly. Moreover, although joint planning of land use and transportation is still widely lauded, it is hardly implemented, because of inadequate co-ordination among local/regional governments.
- Increases in transit ridership are induced more by service speed, frequency and convenience than by price.
- Train services, both metro systems and commuter trains, with their reliable trip times, are particularly effective in inducing shifts of travellers from cars to transit.
- The speed and reliability of bus/streetcar/trolley services can be improved more cost-effectively by giving transit greater priority — bus priority lanes, parking and turning restrictions on other traffic — than through capital investments or fare reductions.
- Increased charges for car use (road tolls, congestion charges, or parking surcharges) would also be more effective than reductions in transit prices.

These findings lead the Panel to conclude that transit service improvement without deterrents to private vehicle use are unlikely to be successful. Policies should therefore encourage the governments involved to seek the most cost-effective solutions, which clearly means solutions that deal with both transit and urban car use.

An innovation just introduced in New Zealand (November 2000) is the transit 'Patronage Fund', which pays transit authorities for the additional patrons they attract.[10] The amounts paid per patron are based on estimates of the social cost savings in travel time, safety and environmental damage, compared to car use. Amounts vary by city and time of day, ranging from NZ$0.90/trip to $3.00/trip at peak times and $0.70/trip at off-peak times. The approach certainly appears innovative — in that it pays only for results, not for intentions, and payment occurs after the fact, not in advance.

Possibilities for Efficiencies in Service Delivery

The trend toward commercialization of transport carriers, so entrenched world-wide, has hardly touched transit services in Canada — or in the U.S., otherwise in the forefront of transport deregulation (at least for domestic services). Transit commercialization is under way in many other developed countries, as well as some less developed countries. It has occurred most extensively in the UK, through tendering for exclusive services (to bidders requiring the lowest subsidy), some tendering for competing services, and some outright privatization. It appears from evidence to date that costs have certainly been reduced, including through reduction or elimination of less lucrative services and fare increases.[11] Most if not all services are still subsidized, so even commercialization of this magnitude has not allowed overall service levels — and effectively fares as well — to escape being political decisions.

In Canadian conditions, it seems possible that deregulation (permitting entrants to compete with what are currently monopoly transit agencies) and commercialization could encourage innovative and less costly services, such as small buses or shared taxis from less-dense suburbs to interconnections with transit trunk routes. But those possibilities are probably quite limited. More extensive commercialization is constrained by labour agreements, cultural factors (people's attachment to their cars), and the fact that urban infrastructure tends to favour private automobile use over transit.

Considerations and Recommendations

The Panel is concerned that despite some encouraging developments in cost efficiencies in very recent years, the cost of transit is a serious obstacle to its expansion, particularly to less dense suburbs. The Panel's research shows that cost-effective improvements — such as measures to give transit priority, including restrictions on where cars can park and turn — offer more promise. Such measures can be inexpensive to implement, though they may be unpopular when used in support of conventional transit plans. The first recommendation therefore addresses cost-effective service improvements.

Recommendation 12.1
The Panel recommends that transit operating agencies and their funders seek the most cost-effective ways of improving their services.

A key feature of transit is its continued delivery almost exclusively by government agencies, which means that costs have not been subjected to market tests to the same extent as those of recently privatized or commercialized infrastructure and services. This is a sensitive policy and political issue for transit agencies and the governments that fund them, particularly because of the nature of labour relations. But the obligation to spend public money wisely requires a hard look at these issues.

Recommendation 12.2
The Panel recommends that experimentation with innovative forms of service (smaller vehicles, shared taxis) be encouraged.

This might include municipal governments tendering for services or certain components of them, such as feeder services from more remote suburbs or surrounding rural areas. Existing transit agencies should of course be encouraged to bid in competition with private providers.

On the key question of whether the federal government should have a funding role, the Panel's proposed solution would involve unprecedented federal action and funding. In an ideal world, there would be no need for subsidies, because urban transport networks are quite capable of providing all the funds necessary for their self-sufficiency — and that would be the most efficient solution. The Panel is convinced that the principal justification for subsidizing transit is to achieve the benefits of reduced road congestion; the more effective means of achieving that, however, is charging directly for road use, according to the amount of congestion. Taken to the logical limit — at the point where road charges incorporated all the social costs — the need for transit subsidies would disappear. But intermediate solutions — with charges covering only a portion of social costs — could certainly generate revenues more than sufficient to subsidize transit. The Panel believes arrangements now in place in Greater Vancouver and Montreal show initial practical steps toward this goal.

Nevertheless, a practical national transportation strategy would also resolve the issue of federal fuel taxes. The Panel has proposed that federal fuel tax revenues be transferred to provinces and territories on condition that they deposit them in newly established roads and transport funds. The Panel also suggested that the agencies administering the funds should receive proposals for alternative projects in other modes.

> **Recommendation 12.3**
> **The Panel recommends that urban transit be permitted to qualify for funding from road user charges.**

The intention is that initially transit projects should be permitted to compete with roads for fuel tax revenues. In the longer term, they should qualify for funding from the proposed provincial and territorial roads and transport funds — or urban regional transport funds on the Greater Vancouver and Montreal models, with wider responsibilities and greater user involvement in decisions. There is no reason in principle to limit funding to capital projects — especially in view of criticisms that past funding favouring capital projects has led to less cost-effective solutions.

The Panel accepts the research finding that any transit service expansion is likely to be successful only if accompanied by disincentives to car use. Without those, it is unlikely that the long-term decline in transit use per capita can be reversed. The proposed roads and transport funds would provide the disincentives very directly, in charging for road use, including congestion and emission surcharges. Municipalities must also be prepared to adopt the unpalatable restrictions on car use needed to give transit priority in traffic flow.

The Panel does not believe it is necessary or appropriate for the federal government, or governments of the provinces and territories, to specify what measures should be adopted in order to qualify for funding. Instead the Panel suggests that agencies simply be given performance-based incentives.

> **Recommendation 12.4**
> **The Panel recommends that payments to transit authorities be made on the basis of their actual performance in inducing shifts from private automobile use to transit.**

The Panel suggests a payment per trip, based on mode shift from car (with verification from ridership counts and periodic surveys of new riders to determine alternative modes).

The Panel emphasizes that, over the longer term, as road charges are adopted, the need for transit subsidization can be expected to diminish. When both roads and transit are assessed, including their external costs, travellers should be able to compare the price for using their cars against the price for using transit as a basis for deciding which mode to use. Transit agencies must be prepared to face this competition and the challenge it presents — a challenge similar to the one that will face road funding agencies — to manage their costs and seek the network size and extent of services that are most efficient.

The Panel wants transit to succeed over the long term — and to make its appropriate contribution to urban transport. These proposals will allow it to do so.

Notes

[1] Total passenger-kilometres as estimated for the National Climate Change Strategy, Transportation Table, *Options Paper*, for 1997, with an updated estimate for transit based on the increase in total passengers between 1997 and 1999.

[2] Total costs including capital are not available from national statistics (Statistics Canada Cat. No. 53-216), but annual subsidies for current capital expenditures are reported, averaging $500 million from 1989 to 1998, when operating costs averaged about $3 billion annually.

[3] Figures quoted in R. Soberman, "Public Transportation in Canadian Municipalities: Implications for the Canada Transportation Act and the Federal Role in Transit", paper prepared for CTAR, March 2001.

[4] Although conversion of transit vehicles to alternative fuels does qualify.

[5] As described in Soberman, "Public Transportation in Canadian Municipalities".

[6] For summaries of such work, see European Conference of Ministers of Transport, *Efficient Transportation for Europe: Policies for the Internalisation of External Costs* (Paris: OECD, 1998); D.L. Greene, D.W. Jones and M.A. Delucchi, ed., *Measuring the Full Social Costs and Benefits of Transportation*, Heidelberg, Germany. Springer-Verlag, 1997.

[7] HLB Decision Economics Ltd., "The Value Proposition For Transit Investment, Subsidy and Federal Involvement", paper prepared for CTAR, April 2001.

[8] For a particularly critical assessment of U.S. policy, see C. Winston, "Government Failure in Urban Transportation", AEI-Brookings Joint Center for Regulatory Studies, Working Paper 00–8, Washington, D.C., Brookings Institution, November 2000.

[9] This summary of research findings is also based on Soberman, "Public Transportation in Canadian Municipalities".

[10] "Transfund New Zealand: Interim Patronage Funding Procedures", Version 1, October 2000; payment rates are posted at www.transfund.govt.nz.

[11] For a summary of international experience, see Halcrow Fox, "Review of Urban Public Transport Competition", report to the UK Department for International Development, May 2000.

Chapter 13
Preserving Urban Rail Corridors

The terms of reference asked the Panel to consider "the advisability of specific measures designed to preserve urban corridors for future mass transit use in the rail line abandonment process." The Panel's interest in this issue was reinforced by several parties that came forward to discuss related topics, including access to urban rail lines and railway access pricing practices. In addition, some interveners expressed concern that unless the federal government provides funding, useful mass transportation corridors may be lost if the railways choose to discontinue lines in urban areas.

For many years CN and CPR, provided commuter rail services in several Canadian cities, in particular Montreal and Toronto. Over time, however, the railways found they were losing substantial amounts of money. As Canada became more urban and cities continued to grow, increasing the demand for better commuter services, railway-operated services gradually gave way to operations managed by local commuter or transit authorities, established and funded in part by provincial governments. As the railways' commuter services were terminated, some of the corridors used for those commuter trains remained in service for freight. In some instances commuter service has now been reintroduced.

In other cases, however, urban and ex-urban corridors not used for commuter services were abandoned. Some were acquired by a provincial or municipal government for current or potential use as a transportation corridor (e.g., part of Ottawa's bus Transitway operates in a former CPR rail corridor). But commuter authorities and municipalities remain concerned that no more rail corridors with transit potential be discontinued without their having the option to acquire them.

Today, the commuter and transit authorities — Montreal's Agence Métropolitaine de Transport (AMT), the Toronto area's GO Transit, and the Greater Vancouver Transportation Authority (TransLink) — have a mandate to provide commuter services. GO was Canada's first interregional public transit system, established to link Toronto's local bus, streetcar and subway services with the suburbs of the Greater Toronto Area. AMT is responsible for developing and operating a commuter rail system and for co-ordinating the efforts of transit operators on the Island of Montreal and in the surrounding areas. TransLink provides ferry, bus and commuter rail systems through subsidiary organizations, including West Coast Express.

Transit authorities receive operating funds from a variety of sources. Some, such as AMT and TransLink, receive funding from fuel taxes collected in their respective metropolitan areas, while GO Transit receives funding from the Greater Toronto Services Board. All receive money from the fare box as well, but revenue shares from fares vary considerably among service providers.

Fare box revenues are insufficient to allow commuter authorities to fund capital projects, which means that acquisitions of capital assets such as property must be funded by other means. Market borrowing would be circumscribed by the inability even to cover operating costs. Accordingly, the ability to acquire capital assets without assistance is limited.

Continued urbanization will bring greater traffic congestion in the next 20 years, with continued growth at suburban and ex-urban nodes also contributing to commuter demand. Several Canadian cities anticipate that commuter rail will become an increasingly attractive option as population and traffic volume rise. In order for the option to be available, existing rail corridors might need to be preserved from abandonment and redevelopment. The Alberta government, for example, recommended protecting urban corridors where needed for mass public transit. TransLink recommended designating urban rail corridors as general transportation corridors. In the city cores, rail corridors are one of the few options available for expanding urban transit or developing it where it does not yet exist.

The Panel sees two broad issues connected with urban rail corridors:

- issues connected with assuring **access** to active rail rights of way for existing or potential new commuter or transit services in various forms, including conventional commuter rail and light rail, and
- issues surrounding **preservation** of urban rail corridors where rights of way are not in use or might later be abandoned or discontinued. Notable among these issues are who should have a claim on such corridors and how compensation of existing owners would be determined, whether the corridors are purchased by commuter authorities or, as some interveners suggested, banked by government for future use.

Access for Commuter Services

Issues and Concerns

Submissions and presentations to the Panel from commuter rail authorities, several provinces and municipalities, the mainline railways and other interested organizations spoke to access-related concerns.

Commuter authorities' main concern was their lack of a right of access to federal railway lines in urban areas. TransLink, supported by the Canadian Urban Transit Association on behalf of its members, recommended amendments to the *Canada Transportation Act* to

- provide for shared use of active rail rights of way by light rail transit, with suitable safety requirements and oversight provisions similar to those for conventional commuter rail,
- provide for access to rail rights of way for urban transit infrastructure where this is possible without undue interference with railway operations, and to
- designate urban rail corridors as general transportation corridors.

The three rail commuter operators also had concerns about the level of charges and saw final offer arbitration as a useful tool during contract negotiations with the railways.

Several provinces, including Quebec, Ontario, Nova Scotia and British Columbia, emphasized to the Panel the importance of access to urban rail corridors in meeting current and future transportation needs.

Several municipalities also commented on access issues. The cities of Vancouver, Burnaby and Surrey wrote in support of the TransLink submission, while the county of Peterborough said that the federal government should adopt sustainable transportation as a core principle and that this would include emphasizing commuter rail.

The railways that own the lines and operate freight services in most existing urban rail corridors were concerned mainly with ensuring that their freight operations would not be disadvantaged by having commuter operations on their lines, with safety issues, and with pricing. CN and CPR pointed to the increasing number of commuter operations on their lines and the availability of final offer arbitration where a railway and a commuter operation were unable to reach agreement on the price of access and the level of service. To summarize the access-related issues raised:

- There needs to be flexibility to manage urban corridors in such a way that freight traffic is maximized, not compromised.
- Negotiations should be conducted on a commercial basis.
- Disagreements should be resolved through binding arbitration involving professional arbitrators.
- Infrastructure owners should receive full compensation for the costs of the commuter operator sharing the line, including opportunity costs.[1]

At least one broad-based organization reinforced some of the railways' concerns. The Greater Vancouver Gateway Council, a group representing a range of interests in the Vancouver area, told the Panel that "priority and primacy of freight transportation on urban rail corridors is a primary concern".

For commuter authorities, the issue is gaining the right of access to a line and the quality of service provided on that line. West Coast Express, for example, wanted assurances that a level of service would continue during a dispute with a railway, while GO Transit was concerned about the availability of capacity to expand its services. For their part, the railways made clear their understanding that responsible corporate citizenship requires them to continue to offer quality services to commuter operators — even if contractual disputes do arise from time to time. They also pointed out that commuter authorities, like other rail line users, have access to final offer arbitration to resolve price and service issues when the parties are unable to reach agreement on a contract by themselves.

Considerations and Recommendations

Commuter services are an important part of urban transport. In keeping with the Panel's principle of relying on market forces wherever possible, the preferred route to the access commuter authorities seek would be negotiations leading to a commercial contract, with a regulatory solution called for only if the commercial approach fails.

The Panel has recommended changes to the provisions dealing with the obligation of a railway company to quote a rate for the movement of traffic at the request of a shipper (Chapter 5). The Panel believes that the commuter authorities' concern could be adequately addressed by extending the availability of this provision, as amended, to commuter authorities. Commuter authorities already have access to final offer arbitration in the event they are not satisfied with the rate the railway company proposes to charge or with the conditions associated with the movement.

> **Recommendation 13.1**
> **The Panel recommends that section 118 of the *Canada Transportation Act*, as amended by the Panel's proposals, be made available to commuter authorities.**

The Panel also recommended in Chapter 5 that the right to apply for running rights be extended to railway operators, regardless of whether they are provincially or federally regulated, and has proposed a method for determining the price of track access. The recourse available through running rights, as amended by the Panel's proposals, would also be available to commuter authorities that want to set themselves up as railway operators.

The Panel examined concerns about the cost of access for commuter authorities and concluded that although the railways appear to have some real bargaining advantages, commuter authorities are not without bargaining power. Final offer arbitration became available to commuter rail operators in 1996. Over the years, agreements for new services have been negotiated, and existing services have been expanded. The Panel is further encouraged by CN's willingness to see contracts between railways and commuter agencies deemed public.

In the Panel's view, the recommended amendments should be sufficient to meet these concerns and deal with the access issues raised. The Panel therefore does not recommend any legislative tampering with existing commuter rail contracts. However, in keeping with the desire for greater transparency, and because commuter rail contracts are entered into by public bodies, the Panel believes such contracts should be made public.

> **Recommendation 13.2**
> **The Panel recommends that future commuter rail contracts be made public and that current contracts be made public unless one of the parties can demonstrate to the satisfaction of the Canadian Transportation Agency that the contract contains commercially sensitive information and that it would be harmed by its release.**

Commuter authorities also raised the issue of amending the *Canada Transportation Act* to allow shared use of active rail rights of way by light rail transit. The access concern is addressed by the Panel's earlier discussion of commuter rail. Research conducted for the Panel indicates, however, that existing safety requirements may constrain the combined use of corridors by conventional railway equipment and urban transit vehicles to some degree. The safety issue is a profoundly important one. In this regard, the Panel encourages interested parties to seek innovative approaches to ensure that safety is not compromised.

Preserving Discontinued Branch Line Corridors

Issues and Concerns

The Panel heard views on two main topics:

- the discontinuance process and lack of formal notification to commuter rail authorities when lines are being proposed for abandonment; and
- how to establish a value for lines proposed for abandonment.

Calls for preserving urban rail corridors came from, among others, the Greater Toronto Services Board, the Comité Interrégional pour le Transport des Marchandises, and Rail Ways to the Future. Looking at the existing discontinuance process and the capacity of commuter rail authorities to purchase discontinued lines, one possible solution is for the federal government to establish a rail line bank to acquire and retain lines proposed for abandonment. Several advocates of preservation said compensation for line owners should be "fair" (the government of Alberta) or should reflect "a value appropriate to a transportation corridor" (TransLink).

In submissions and presentations, CN and CPR made the following points, among others:

- Urban rail corridors are often unique, and if they did not exist the cost of assembly would be prohibitive. Acquisition of urban rail corridors should therefore be through a commercial process.[2]
- Forced sale at less than fair market would constitute expropriation and would impose an obligation on the railways to subsidize a public undertaking.[3]
- 'Across the fence', with a premium for assembly, is the appropriate means of valuing urban corridors.[4]
- Arbitration of land values is complex and should be conducted, under the auspices of the Canadian Transportation Agency, by an arbitrator expert in land valuations.[5]

Considerations and Recommendations

A review of the rail lines now running through major urban areas with commuter rail services suggests that few would likely be candidates for abandonment, since a significant share are either part of a railway's mainline or already have commuter trains operating on them.

For example, Montreal's AMT operates in part on CN's Halifax-Montreal mainline, in part on other mainlines, and in part on lines dedicated essentially to commuter rail. Similarly, commuter operations in and around Toronto also use a combination of mainline segments and branch line segments, none of which appears to be in any danger of abandonment, although some may have capacity limitations. West Coast Express in Vancouver operates over the CPR mainline in a high-density corridor and has invested a considerable amount of money in having CPR upgrade the line for commuter services.

For lines already serving commuter trains, as long as the railways believe that they are receiving fair compensation from the commuter authority, there would appear to be no reason to abandon a line. Mainlines are also unlikely to be proposed for abandonment unless they are replaced by a re-routed mainline, as could occur, for example, after a merger of CN and CPR, should such an event ever occur. Nevertheless, the preservation of urban and ex-urban rail lines could prove important in the development of commuter rail services.

Discontinuance Process

Despite these observations, concern about the discontinuance process remains, precisely because the corridors are unique and potentially among the few options available for new or expanded transit services. Commuter authorities in particular questioned the appropriateness of the abandonment provisions in the context of urban realities.

A railway is required to publish a three-year plan indicating which lines it proposes to discontinue. After a twelve-month waiting period, lines not already sold commercially for continued railway operations are to be made available in sequence to the federal (a restricted option), the provincial, and the relevant municipal governments. Traditionally, the federal government has not acquired lines proposed for abandonment, and provincial governments are less likely to do so now than they were in the past. Having municipalities on the notification list tends to add to the length and complexity of the process, because if the line in question goes through more than one, all municipalities on the line become part of the decision-making process.

Direct notice to relevant commuter authorities is not required, and commuter authorities have no special right of acquisition. Commuter rail authorities asked that they receive notice and be able to receive and respond to offers.

Section 145 of the *Canada Transportation Act* outlines conditions under which a railway company must offer a line that has been identified for discontinuance to various levels of government. The Panel believes that such lines should be also be offered to commuter rail authorities if a municipality or the commuter authority has identified them in its official plan or transportation plan as being required for mass transit purposes. Further, commuter rail authorities should rank ahead of municipalities with respect to these lines, so that corridors can be maintained for urban transportation purposes where required.

> **Recommendation 13.3**
> **The Panel recommends that section 145 of the *Canada Transportation Act* be amended to require that a railway offer lines it intends to discontinue to commuter rail authorities before offering them to a municipal or district government, provided the line has been identified officially as being required for urban transit purposes.**

Valuation of Corridors

When a railway company offers a railway line to governments or, following the Panel's recommendation, to commuter rail authorities, it must do so at a price no higher than "net salvage value". Valuation of the track component — ties, rails and other material — is relatively straightforward, but valuation of the underlying land has been a particularly contentious area, especially where the line traverses an urban area.

Railways want to maximize the return from the sale of the land, as they would be free to do if it were not required for government or commuter purposes, while governments and commuter authorities argue that the land may have limited use, and this should be recognized in its value. Alternatively, some argue that the railways should not reap a windfall gain from the increase in the value of land, which in many cases has been in railway hands since before urbanization.

The current mechanism for line abandonment ensures that the railways follow certain protocols. When a line is transferred to public ownership at net salvage value, to be used or preserved for later use as an urban transportation corridor, the essential fact is that offering the line on a commercial basis to other railways did not result in a sale.

The Panel believes that the only valuation that can be recognized as fair to both the railway and those who would acquire the lands at net salvage value is one based on recognized land valuation principles and techniques, which attempt to provide the best possible estimate of value.

The 'across the fence' value is the usual starting point for valuing a corridor. The U.S. Appraisal Institute defines this as "a means of estimating the price or value of land adjacent to or 'across the fence' from a railroad, pipeline, highway or other corridor real estate; as distinguished from valuing the right-of-way as a separate entity." The method is based on the premise that the value of the land within a corridor should reflect the land through which it passes; it requires detailed analysis, in which the corridor is valued in segments or zones consistent with the adjacent land use (based on the same 'highest and best use'). Given its acceptance in corridor valuation, the Panel believes that the across the fence value should be used as the basis for land valuations in net salvage value determinations.

The Panel also concludes that in such cases, no assemblage premium should be applied. The assemblage factor may be appropriate for estimating the cost of constructing a new line for internal use by an organization, but it should have no bearing in determining net salvage value. This is because of the simple fact that a commercial sale to another rail operator did not occur, resulting in the corridor being transferred at net salvage value. Further, applying an assembly premium would be inconsistent with the way the net salvage value of track and other materials is determined. Finally, in jurisdictions where property taxes are based on market value, the railway is not paying taxes based on assessed values using an enhancement factor. In the Panel's view, the methodology recommended here should be applied to any rail corridor being transferred under the *Canada Transportation Act* at net salvage value.

> **Recommendation 13.4**
> **The Panel recommends that land being transferred under the *Canada Transportation Act* process at net salvage value be valued at no more than its 'across the fence' value, with no premium for assembly applied.**

Within these parameters, there are several possible valid valuation approaches, and the methodology must remain flexible enough to allow the appraisal to reflect the inherent characteristics of the land within the corridor. These approaches would include information derived from the 'direct comparison approach', where that is possible, the application of a discount factor to the across the fence value where appropriate, and a more detailed 'break-up analysis'.[6] In all cases, adjustments would need to be made for interests in leases and agreements that are not transferred.

Rail Line Banking

Some participants in the Panel's consultations saw sale of abandoned lines for development purposes, particularly in urban areas, as a serious threat to long-term transport plans. In addition, they argued that the time frame for the current discontinuance process gives provincial and municipal governments insufficient time to decide to buy a railway line offered for transfer.

For some the solution is a rail line bank, with the federal government acquiring railway corridors in which municipal governments have expressed a formal interest and banking them (possibly through the use of a revolving fund) for potential use as urban transit corridors.

The United States has a system for banking rail lines (under the National Trails System Act), many of which can be used as trails pending further need as rail corridors. Approximately 90% of all rail/trail projects (whether rail banked or not) are funded from federal Transportation Enhancement funds, a subset of Surface Transportation Program funds. Funds are used to purchase lines in an 80/20 federal/sponsor cost-sharing formula. Also, a railway company that donates land may be eligible for income tax deductions under federal and state laws. Banking lines may be simpler in the U.S., however, since the railways in many instances do not own the land on which their infrastructure rests, unlike the situation in Canada, where the railways own both the infrastructure and the land.

The Panel notes that rail line banking is a matter normally handled by the provinces, although in recent years the provinces have been less inclined to purchase surplus lines. The federal government has some responsibility for urban rail issues, given that lines of federal railways are under its constitutional responsibility.

Under the Panel's earlier proposal, railway companies planning to discontinue a line would offer it sequentially to the federal government, the provincial government, commuter authorities, and municipal governments. Where lines or corridors are proposed for mass transit use, they could be purchased by either the province or the commuter authority — whether the line was used immediately or the corridor was banked for future use. Consequently, **there is no requirement for further amendment to the line discontinuance and transfer process, beyond that recommended by the Panel, to achieve this purpose**.

Some portions of lines (such as spurs) that are no longer needed by railway companies could be important for urban transport purposes, but they are not covered by the current discontinuance process. The Panel believes an expeditious process should be available for offering such lines for sale to governments. Where a line has been identified by a municipality or commuter authority in its official or transportation plan as being required for mass transit purposes, a railway company should be required to offer the line for sale at net salvage value to the province, the commuter authority or the municipal governments involved.

> **Recommendation 13.5**
> **The Panel recommends that railway companies be required to offer for sale at net salvage value, to the relevant province, commuter authority or municipal government(s), a spur or other line not covered by the current transfer and discontinuance process, provided the line has been identified officially as being required for urban transit purposes.**

Finally, where the purchase of a line or spur is deemed necessary for current or future urban transit use, funding to help cover the purchase price could be made available as part of the integrated approach the Panel recommends for establishing priorities in urban passenger transportation and funding projects in consequence.

> **Recommendation 13.6**
> **The Panel recommends that the purchase of railway lines for use as urban transit corridors (including spurs identified through the process set out in the previous recommendation) qualify for funding consideration from the provincial and territorial roads and transport funds the Panel proposes.**

In making this recommendation, the Panel is aware that in the case of urban rail corridors intended for future use, evaluation of their purchase would likely produce a negative net present value, so an application would likely fail the cost/benefit test that projects competing for funds would have to meet. The Panel sees such corridors as falling under a public interest exception category — in the sense that a case could be made that these are strategic investments for the future and that forgoing current spending on another project in order to put aside a corridor for future use is justifiable. Strict discipline would have to be applied, however, so that only corridors with genuine future potential would be put forward as candidates for purchase.

Notes

[1] Adapted from Canadian Pacific Railway, "Canada's Railways: Achieving Full Potential — General Brief to the *Canada Transportation Act* Review Panel", December 2000, pp. 46–49.

[2] Canadian National Railway, "Submission to the Canada Transportation Act Review Panel", November 2000, p. 40.

[3] Canadian Pacific Railway, "Canada's Railways: Achieving Full Potential", p. 47.

[4] CN submission, p. 41.

[5] CPR submission, p. 49.

[6] **Direct comparison approach:** This approach to value is not common but could be used, provided adequate, verifiable, abandoned Canadian corridor sales are available that are similar in terms of location, physical features and other characteristics.

Application of a discount factor to the across the fence value: The appraisal must begin by determining across the fence values to ensure that the corridor's value includes some reflection of the abutting land uses through which it passes. The next step is to apply a discount factor to the entire corridor. To be relevant, the factor must be derived from verified sales of Canadian abandoned corridors located within similar market areas.

Alternatively, a more detailed **break-up analysis** could be completed for the corridor to establish the present value of the net amount the owner would likely receive if it were sold on a piecemeal basis over a reasonable period of time. This is based on the highest and best use of the individual segments of the line. This must take into account the individual characteristics of each parcel, some of which may be viable independently, whereas others would need to be sold to abutting owners. The reaction of buyers to urban land may be different. Unlike rural areas, the soil productivity (or lack thereof) is not an issue. In all cases, market evidence or case studies must be presented by the appraiser to support adjustment factors. (Kevin Antonides, "Valuation of Rail Corridors", brief prepared for CTAR, May 2001.)

Chapter 14

Transportation Accessibility for Persons with Disabilities

People with disabilities have traditionally had difficulty making full use of the transportation system to get to work, travel on business, visit friends and relatives, or take a vacation. Obstacles in the system have prevented these Canadians from participating fully in activities others take for granted. Ensuring adequate access to the transportation system for persons with disabilities is an important consideration under Canadian law. Further, predictions are that the number of persons with disabilities, already a significant percentage of the population, will continue to grow as the population ages.

Under the *Canada Transportation Act* the Canadian Transportation Agency is responsible for eliminating undue obstacles to the mobility of persons with disabilities from the transportation network under federal jurisdiction. The Agency does this by

- developing regulations and codes of practice to deal with systemic issues;
- resolving individual complaints on a case-by-case basis; and
- communicating with and educating travellers with disabilities, service providers and decision makers on the nature and importance of mobility issues.

Regulations and Codes of Practice

The Agency has implemented two sets of regulations using its authority under the *Canada Transportation Act*:

- Part VII of the *Air Transport Regulations* (ATRs), which applies to Canadian air carriers operating in Canada with aircraft of 30 or more seats, and
- the *Personnel Training Regulations*.

Part VII of the ATRs sets out important accessibility principles, providing for example that a carrier must accept a passenger's judgement that he or she does not require any special assistance and that passengers requiring special services are expected to give the carrier reasonable notice of their needs. As well, the ATRs deal with issues such as

- communication of information;
- availability of accessible seats;
- co-ordination where more than one air carrier is involved;
- the services a carrier must provide in a terminal and on an aircraft;
- requiring carriers to accept properly trained assistance animals in the cabin; and
- treatment of wheelchairs, mobility and technical aids.

The *Personnel Training Regulations* require appropriate training for employees and contractors of air carriers, airports, rail and marine carriers who interact with the public, make decisions respecting the carriage of persons, or provide specialized services regarding the transportation of persons with disabilities.

The Agency also works with interested parties to produce codes of practice. Consistent with the recent practice of avoiding regulation where less intrusive means of achieving policy objectives are available, the codes allow the Agency to work with carriers and service providers to remove obstacles to mobility on a voluntary basis. Codes of practice also have the advantage that they can be put in place more quickly than regulations. The Agency has issued three performance-based standards as codes of practice:

- *Aircraft Accessibility for Persons with Disabilities* (1996);
- *Passenger Rail Car Accessibility and Terms and Conditions of Carriage by Rail of Persons with Disabilities* (1998); and
- *Ferry Accessibility for Persons with Disabilities* (1999).

Intercity bus operators, terminals and bus stops are covered by Transport Canada's *Intercity Bus Code of Practice*.

The Agency also requires international scheduled air service tariffs to contain terms and conditions of carriage that recognize the right of a person with a disability to determine whether he or she needs to travel with an attendant and that contain the carrier's policies regarding the carriage of persons with disabilities.

The Agency monitors industry compliance with regulations and codes of practice by conducting surveys, inspecting sites and investigating complaints. As well the Agency surveys people with disabilities to determine their level of satisfaction. The Air Travel Accessibility Survey Report (May 2001) said that most respondents were satisfied with the degree to which their needs were met and with the level of sensitivity to their needs.

In addition, before a code of practice comes into force, the Agency collects baseline data, so that it can then measure improvements in accessibility by comparing data collected after a code comes into force against the baseline.

Recently the Agency has been studying means to enhance access to aircraft smaller than 30 seats. This area presents unique challenges because of the physical limitations of the aircraft involved.

Complaints

In 2000 the Agency received 87 complaints dealing with issues ranging from terminal accessibility to service issues on aircraft. It resolved 47 of the complaints and issued follow-up decisions in another 26. Dealing with individual complaints also serves as an early warning system, identifying systemic problems that may require a broader solution such as a code of practice or regulation.

Canadians With Disabilities — Demographics

In 1991 15.5% of the population — 4.2 million people — reported having a disability:

- Adults with disabilities numbered 3.53 million (16.8%).
- Those with mobility disabilities were estimated at 2.02 million (9.6%), and those using wheelchairs at 124,000 (0.6%).
- Adults unable to use intercity services or having difficulties using them represented 5% of the total adult population (1.06 million people), and those experiencing difficulties using local transportation also represented about 5%.
- Individuals with limitations relating to mobility amounted to 7.2% of the adult population, and 75% of those were classified as transportation disabled.
- Among persons classified as transportation disabled, 31% had hearing limitations, 19% had sight limitations, and 9% had speech limitations.
- About 40% of transportation disabled individuals had disabilities relating to mental health conditions, learning disabilities, or developmental disabilities.

Source: Statistics Canada.

What the Panel Heard

During its consultations, the Panel heard from advocacy groups for people with disabilities, who asserted that, notwithstanding the Agency's regulations and codes of practice, most buildings and transportation modes continue to lack sufficient equipment for travellers with disabilities. Some groups, such as Kéroul, the Council of Canadians with Disabilities and Guide Dog Users of Canada, argued that codes of practice should be more specific about required equipment and that they are not sufficient to make the industry comply with standards or meet the needs of travellers with disabilities. Moreover, Guide Dog Users of Canada argued that there is no legislative mandate for codes of practice and that they should be converted to regulations. Other interveners suggested that U.S. legislation could be a useful model for Canada (see box).

Other concerns related to the perception that some disabilities are not recognized by the Canadian Transportation Agency and to the needs of persons with certain disabilities not addressed in the Act. The Canadian Hearing Society argued that the Act should specifically identify the disabilities it covers.

In its presentation the Canadian Human Rights Commission (CHRC) highlighted the fact that although the Agency and the CHRC have overlapping jurisdiction, the two agencies have co-ordinated their activities as is required under the Act, and enjoy a smooth working relationship. Where a complaint involves the transportation system, the CHRC normally suggests that complainants file a complaint with the Agency before coming to the CHRC, because the Commission considers the Agency process an alternative means of redress under the *Canadian Human Rights Act*.

Complaints about transportation generally come before the CHRC only when the Agency has not fully resolved the complaint. The CHRC believes this happens in some cases because the Agency does not have the power to order compensation for loss of dignity or hurt feelings where it finds that an undue obstacle exists. The CHRC pointed out that an objective of human rights law is to make victims of discrimination whole, and that under its legislation a Human Rights Tribunal can award such compensation of up to $20,000 in such cases. The CHRC invited the Panel to consider whether it would be appropriate to allow the Agency to order such compensation, thus enabling complainants to have complaints dealt with entirely by the Agency. The CHRC also echoed the concern of some interveners that codes of practice are not enforceable.

U.S. Legislation and Regulations

Advocates for persons with disabilities argue that the U.S. legislation is a model for North America on ensuring that persons with disabilities obtain access to the transportation system by eliminating unnecessary or unjustified barriers. Moreover, some groups that met with the Panel expressed satisfaction with U.S. regulations and legislation, asserting that there is more protection for travellers with disabilities in the U.S. than in Canada, particularly for air travel. Canada should update its legislation accordingly, they said.

The objective of the *Americans with Disabilities Act* (ADA, 1990) is to guarantee equality to all Americans with disabilities, including equality of access to the transportation system. This legislation prescribes a comprehensive program that affects every aspect of transportation and decrees that any facility that is open to the public must be accessible to people with disabilities.

The Federal Highway Administration (FHWA) is obliged to provide technical information to field offices on how to comply with highway-related ADA provisions. This technical guidance is particularly necessary in the right-of-way program, where the FHWA frequently appraises, acquires, and disposes of structures subject to ADA provisions (public accommodations such as business or commercial facilities).

The Federal Transit Administration (FTA) has an important responsibility under the Act. ADA requires that all current and future fixed rail and bus systems across the country be fully accessible. It also requires that additional paratransit services be provided for people who cannot gain access to fixed-route services. Moreover, the FTA is in charge of reviewing local transit organizations' plans for meeting this mandate.

Under the *Air Carrier Access Act* of 1986 (ACAA), the Office of the Secretary, Consumer Affairs Division, ensures access to airports and airlines by people with disabilities. The division monitors airlines' compliance with the Act, and it receives and investigates complaints about access from the public. Smaller aircraft are not rigorously regulated, since the ACAA addresses aircraft accessibility mainly for aircraft with 30 passenger seats or more. The only specific provision for smaller aircraft relates to the fact that ramps or mechanical lifts must be available for most aircraft with 19 through 30 seats at larger U.S. airports. In April 2000, legislation was adopted that extends the requirements of the ACAA to foreign airlines.

Participants in the Panel's consultations were also concerned that the *Code of Practice: Aircraft Accessibility for Persons with Disabilities* and Part VII of the ATRs apply only to aircraft with 30 seats or more. The Council of Canadians with Disabilities noted that the lack of regulation regarding access to small aircraft poses significant problems for travellers with disabilities.

On the matter of fares for attendants, Kéroul, the Alberta Department of Infrastructure and the Council of Canadians with Disabilities argued that the legislation should specify the right of persons with disabilities to bring along a personal attendant free of charge — in the same way as a mobility aid or service animal is covered by the ticket purchased by a traveller with a disability.

Kéroul made several suggestions, including a request that all air carriers, Canadian and foreign, operating in Canada be required to meet the needs of persons with disabilities when boarding, during transfers, in flight and on landing. They suggested that, where appropriate, carriers and operators adopt the Canadian Standards Association standard on *Barrier-free Design*, which specifies how to make buildings and other facilities barrier-free, accessible, and safe for use by persons with physical or sensory disabilities. Kéroul was also concerned that some carriers and terminal operators do not provide enough training time for employees. They noted that where the training is not a requirement, companies appear reluctant to provide training programs.

Finally, the Panel heard suggestions that the *Canada Transportation Act* be amended to set out the complaints process in law and concerns that the Agency is taking too long to deal with complaints.

Considerations and Recommendations

The record shows that in the 13 years since introduction of the legislative provisions dealing with transportation accessibility for persons with disabilities, significant progress has been made in removing undue obstacles to mobility from the transportation system. The Panel is also satisfied that, for the most part, the Agency has the necessary powers and tools to do the job. Codes of practice are a flexible, useful means of ensuring better access. While some groups have concerns about their enforceability, evidence of problems or abuse is scant. As well, the Agency has an active monitoring program that enables it to take remedial action if necessary. In the event of problems, the Agency can propose a binding regulation. Given the general advantages of codes over regulatory processes, however, the Panel encourages this approach wherever feasible.

One concern that came up over and over again — a concern the Panel shares — has to do with the Agency's ability to deal efficiently with systemic problems. Before 1996 the Agency had a general power to investigate any matter on its own motion. Consistent with the policy of establishing a complaint-driven process, this power was not included in the *Canada Transportation Act*. The Panel is concerned that there is now a gap between the Agency's ability to make regulations and its jurisdiction to deal with individual complaints. The Panel believes this important tool should be restored with respect to accessibility issues, as it provides an effective means for the Agency to address these matters.

> **Recommendation 14.1**
> **The Panel recommends that the Canadian Transportation Agency be given the power to investigate accessibility matters on its own motion.**

Another area where consensus seems elusive is air fares for attendants accompanying travellers with disabilities. Although most transportation carriers allow people with disabilities to travel with an attendant (if required) free of charge, the air industry continues to charge attendants a fare, although most carriers do so at a discounted rate.

This issue has been a bone of contention for many years between people with disabilities and air carriers. Advocates of 'one person, one fare' claim that a person with a disability should be able to travel in the same manner as anyone else who requires assistance, without charge for the assistance, whether it comes from an attendant or someone else. Carriers are concerned about revenue erosion resulting from a free of charge policy for attendants. In 1995 the Agency proposed a regulation to require air carriers to carry an attendant at 25% of the applicable fare charged a person with a disability. Resolution appears stalled — with carriers wanting the status quo and people with disabilities saying 25% is unwarranted. The Panel is concerned that this issue has taken so long to resolve and urges all involved to redouble their efforts to do so.

> **Recommendation 14.2**
> **The Panel recommends that the attendant air fare issue be resolved as quickly as possible.**

The Panel believes that the ability to obtain compensation for loss of dignity or hurt feelings, in circumstances where the loss arises from discrimination in the transportation system, is critical. At present such damages can be obtained under the *Canadian Human Rights Act*. The Panel believes that this jurisdiction is best left to the expertise of tribunals established under that act.

Most other issues raised by interveners deal with specific areas where the Agency can or is already undertaking activities, such as accessibility standards, particularly for small aircraft, and removing undue obstacles to international carriage by air on a complaint basis. We urge groups that have these concerns to raise the issues with the Agency.

To those who advocate a statutory definition of disability, the Panel urges caution. The proposal seems attractive at first blush, but a legislated definition would necessarily exclude certain persons with disabilities. We believe that the Agency is in the best position to consider the arguments about what constitutes a disability as these issues arise in complaints. For example the Agency is currently assessing whether obesity should be considered a disability under the Act.

Another means suggested for improving Agency decisions is to provide funding to facilitate the participation of complainants and interveners in selected cases. The purpose of funding would be to ensure that sufficient resources were available to deal with systemic issues that might arise in a complaint, issues not previously dealt with by the Agency or that might not be of particular interest to the complainant. The Panel's recommendation to reinstate the Agency's power to inquire into matters on its own motion will go far in alleviating the concern that issues may not be properly explored because of insufficient resources. This power, in conjunction with the Agency's power to appoint experts or persons with technical or special knowledge to assist in an advisory capacity on matters before the Agency, provides sufficient authority for the Agency to canvass the issues raised in any given case, including, where appropriate, the hiring of counsel to present a brief.

Improving access to Canada's transportation system for persons with disabilities must continue. While impressive progress has been made over the past few years, much remains to be done. With the tools provided in the *Canada Transportation Act*, including the improvements the Panel recommends, the Canadian Transportation Agency will be well placed to continue removing undue obstacles to mobility.

Chapter 15
The Trucking Industry

The trucking industry is an important component of Canada's commercial transportation industry. For-hire carriers have annual revenues of almost $20 billion, which is more than 40% of the transportation component of Canada's gross domestic product. Truck activity also includes private carriers, couriers, farm trucks and a wide range of trucks operated by the trades, the service sector, utilities and governments. Some observers suggest that the value of all this activity is in the range of $40 billion annually.

The Federal Role

In terms of regulation and policy, the federal role in trucking is not as large as it is for the air, rail and marine industries, largely because the roads used by trucks are for the most part owned and maintained by the provinces and territories and by local governments under their jurisdiction. The provinces and territories also have principal responsibility for regulating activity on these roads. For example, provincial and territorial governments have sole responsibility for the regulations controlling truck weights and dimensions, a situation quite different from that in many other countries, where the central government sets these standards.

The federal role is relatively small for a second important reason: since 1954, responsibility for regulating extra-provincial truck operators has been delegated to the provinces under the *Motor Vehicle Transport Act*. The latest version, the *Motor Vehicle Transport Act, 1987* (MVTA), is now being amended.

Other than its regulatory and policy role under the MVTA — where the federal government establishes the conditions under which regulation is delegated to the provinces — the federal government has an interest in trucking in only a few other areas. These include vehicle standards under the *Motor Vehicle Safety Act*, the transportation of dangerous goods, responsibility for international crossings and a small role in research and development.

Going beyond a strict accounting of constitutional responsibilities, however, the federal government has a large interest in policies on trucking. This is because of the nature of trucking, in particular the long-distance for-hire segment. Trucks owned by large for-hire motor carriers continually cross jurisdictional boundaries. They also haul freight for almost all sectors of the economy, which puts them under the broad umbrella of many federal policies (labour, agricultural, trade and industrial policies, and so on).

Given the importance of trucking, its interjurisdictional (including international) operating characteristics, and its interaction with most other sectors of the economy, it would be impossible for the federal government not to have a broad policy interest in trucking. To take one example, trucks carry 59% of Canada's exports to the United States, as measured by value, and 81% of imports from the United States.

Some parties (e.g. the Canadian Trucking Alliance) argued for a broader federal regulatory and policy role, relying on section 5 of the *Canada Transportation Act*. However, in commenting on the performance of the federal government, the Alliance's submission noted that

> despite the laudable policy objectives contained in section 5 of the *Canada Transportation Act*, the federal government has failed to commit the necessary resources and exercise the leadership required to translate these policy objectives into reality, resulting in a patchwork quilt of regulations across the country which hampers trucking industry productivity, competitiveness and profitability, and impedes optimization of the industry's safety and environmental performance.

This call for a larger federal role echoes the last federal commission that looked at transportation legislation. In 1993 the National Transportation Act Review Commission made several recommendations, the thrust of which was that if the provinces could not develop uniform safety regulations or technical standards for trucking, then the federal government should take over more of the regulatory and policy (standard-setting) role.

Almost all shippers responding to the Panel's survey were satisfied with trucking services provided in 2000. Some expressed concerns, however, about safety and the lack of uniform standards both within Canada and between Canada and the United States.

With this background, the Panel offers this review of regulatory and policy issues that may be important in the future.

Implementing a National Safety Code

The MVTA phased out economic regulation — essentially, government control over entry to the industry — for extra-provincial trucking. The repeal of Part III of the MVTA in 1999 had the same effect on most intraprovincial truck operations.

Under the proposed amendments (Bill S-3, now before Parliament), the federal government would continue to delegate to the provinces and territories authority to regulate extra-provincial trucking — that is, to issue safety fitness certificates — as long as each province and territory implemented a safety-rating regime consistent with the National Safety Code. A province or territory that did not do this could have its ability to issue safety fitness certificates to extra-provincial carriers taken away.

In its brief to the Panel, the Canadian Trucking Alliance supported the withdrawal of delegation in cases of non-conformance. The Alliance suggested nevertheless that federal funding must be committed to ensure consistency in implementing the National Safety Code. Such funding should be tied, however, to performance in implementing the standards.

Several issues arise:

- First, will the provinces and territories be successful in implementing a uniform National Safety Code? They agreed to do this in 1987, but it has not yet been achieved. Several critical deadlines for implementing parts of the Code have been missed. In other cases, provinces have implemented parts of the Code with major deviations from standards agreed to.
- Second, Transport Canada needs a means to determine when a safety standard has been implemented and when a deviation from the standard is significant.
- Third, assuming the amendments before Parliament become law, some observers ask what circumstances might prompt the federal government to exercise its power to take away a province's authority to issue safety fitness certificates for extra-provincial carriers. Doing so would mean that any carrier domiciled in that province would not be allowed to operate beyond the province's borders (although there would be nothing to stop the carrier applying from a neighbouring province).

Other important policy issues also arise from the MVTA amendments, including relations with foreign governments, alternative regulatory choices and re-regulation; all are discussed later in this chapter.

Two-Tier Regulatory System

Some parties suggest that the federal government should take a more active role in regulating extra-provincial trucking, arguing it has the necessary authority under the constitution. This is the model in the United States, where it does result in more uniform safety regulations for interstate truckers.

The policy issue here is complex but can be simplified somewhat by asking whether a two-tier system — the federal government regulating extra-provincial carriers and the provincial and territorial governments regulating local carriers — is preferable to the current co-operative approach.

The current approach relies on groups within the Canadian Council of Motor Transport Administrators (CCMTA) — consisting of representatives from the federal government, provinces and territories — developing standards, regulations and policies in a 'consensus' forum. Industry also participates in the work of the CCMTA. The difficulty with this approach, as the Canadian Trucking Alliance observed, is that the results are sometimes a patchwork quilt. The difficulty with the alternative, two-tier approach is that there may be two levels of regulations, one for extra-provincial carriers and one for local carriers. Those who favcur the federal government taking over point to the United States, where this approach seems to work. Those with reservations about a two-tier system suggest that demands for a level playing field might re-emerge if regulatory differences between the two groups of carriers were large.

There is a range of alternatives between these two positions (federal government regulating versus delegating): the federal government regulating extra-provincial carriers with the provinces providing the enforcement, for example, or the current arrangements envisaged in the amended MVTA continuing, with the federal government supporting the provinces and territories financially and otherwise to enable them to regulate in a uniform and consistent manner.

The situation is made even more complex by the fact that although the quest for absolute uniformity has a certain appeal, the evidence on whether rigid standards or regulations are a good thing is clouded. Given the regional nature of some markets and transportation requirements, some regional accommodations may be warranted (for example in vehicle configurations).

There are advantages to uniform rules. There also may be dangers if the quest for uniformity imposes substandard rules.

Re-regulation

Almost everyone agrees that the days of economic regulation are over, not just in trucking but in a wide range of other sectors. Historically, economic regulation was justified in areas where it was alleged that the market did not work to allocate resources and ensure efficient delivery of a reasonably satisfactory product. Terms such as 'natural monopoly' (in regard to railways) or 'destructive competition' (in the case of trucking) were used to label these instances of market failure, even though some disputed their existence.

Since deregulation, all the evidence suggests that the trucking market is highly competitive and that shippers are receiving good services at good rates. A 1999 industry-wide operating ratio of 0.95 for for-hire carriers with annual revenues of at least $1 million suggests that most trucking firms, while perhaps not as profitable as owners would like, are surviving.

However, one issue on the horizon suggests that there are, and perhaps will be increasingly, political pressures to re-regulate. The issue is how one segment of the industry — owner-operators — has been affected by this new, highly competitive market. Most of the evidence on working conditions and rates of pay is from the United States. A recent Statistics Canada study confirms, however, that Canadian owner-operators have also been affected. Indeed, their 1997 after-tax earnings averaged just $16,000.

Trucking protests emerged in the wake of fuel price increases in 2000. Industry observers suggest that the real issue is not fuel costs; rather, dissatisfaction stems from the contractual and operating arrangements between carriers and owner-operators, which are inadequate for dealing with industry practices and conditions.

Most would argue that this matter will be settled in the marketplace, but there is always a possibility that some political nerve will be hit, rash promises will be made, and governments will feel compelled to step back in to regulate parts of the market.

It would be a mistake to assume that the regulation/deregulation issue — which monopolized debate on transportation matters for most of the twentieth century — is dead. Those who understand the history of transportation policy in Canada will have to evaluate carefully any new proposals to do something about problems being experienced by segments of the trucking industry. These proposals could be a back-door approach to regulation. This may or may not be a good thing, but it is something that should be entered into only with full knowledge of the consequences.

In this respect, the Panel believes that competitive market forces should define the structure and commercial arrangements within an industry. Only in instances of market failure or abuse should any form of economic regulation be contemplated. Neither of these conditions appears to characterize the trucking industry at this point.

Co-ordinating Policies with NAFTA Partners

While motor carrier regulations are broadly similar in Canada and the United States, discussions to explore the possibility of greater co-ordination between the two countries are needed. This need will intensify as and when Mexican trucks start to operate freely in NAFTA countries.

In the past, several mechanisms have facilitated co-ordination of regulations and policies between Canada and the United States — consultative mechanisms, participation of officials from each country in the other country's regulatory forums, the Land Transportation Standards Subcommittee established under NAFTA, and so on. In some areas — for example, truck weights and dimensions, reciprocal fuel tax agreements, the International Registration Plan for truck registrations, the Commercial Vehicle Safety Alliance for roadside inspections — the provinces and territories play the major role. In other areas — cabotage, for instance, or the reciprocal recognition of safety ratings — the federal government plays the principal role. In still other areas — research into hours of work or load security — both levels of government play comparable roles.

It is apparent that the need for federal activity (if the issue is under federal jurisdiction) or federal leadership (if the issue is under provincial jurisdiction) will increase in the coming years. This is because

1. the evidence to date suggests the rate of growth in cross-border trucking is increasing at a faster pace than growth in the economy or growth in domestic trucking;
2. increasing attention will be focused on how the respective regulations of the three NAFTA countries work in respect of foreign carriers; and
3. the opening of the United States-Mexico border to trucks from each country will intensify pressures in the United States to co-ordinate their regulations and policies with those of their NAFTA partners.

Despite the fact that Canadian and U.S. regulations are broadly similar, differences remain that call for strong leadership from the federal government to ensure recognition of Canadian standards and operating procedures under NAFTA.

Vehicle Emissions

Environment Canada has authority under the *Canadian Environmental Protection Act, 1999* to regulate emission levels for trucks and other vehicles. Recent Canadian regulation has mirrored standards set by the U.S. Environmental Protection Agency. As a result, truck engines in both countries meet the same standards. The regulations control emission levels for various substances that affect low-level air quality. Truck engines are considerably cleaner today than they were a decade ago, and with the current timetable for increasing standards, will become even more so. By 2007, much stricter standards for nitrogen oxides and particulates, along with fuel with much lower sulphur content, will be introduced in both countries.[1] In consequence, a recent report for the North American Commission for Environmental Cooperation concludes that "by 2020, truck emissions of NOx and PM-10 per ton-kilometre [will be] considerably lower than rail in the U.S.-Canada corridors."[2]

To this extent, then, there are no particularly urgent policy issues (new standards, enforcement) on the horizon for Canada. (Canada still has to agree to the new low-sulphur fuel standards — 15 parts per million — for diesel fuel.)

Beyond the regulation of certain emissions in new truck engines, however, are two other potential issues:

- First, regulating emission levels for trucks in service is up to the provinces. Two provinces and several states now have emission tests they use to carry out this responsibility. As in other areas where provinces or states have regulatory responsibility, the situation could arise in the future where either conflicting on-road emission tests develop or, to use the industry's phrase, a patchwork quilt of regulations arises. The federal government might therefore have a role, just as it does now in helping to achieve uniform safety regulations under the National Safety Code.
- Second, although there are no current plans to control or reduce emissions of greenhouse gases (mainly carbon dioxide), there could be in the future if the Kyoto Protocol, or possibly a successor agreement, were ratified.

The trucking industry is a large and growing contributor to greenhouse gas emissions, currently accounting for about 27% of total emissions from the transport sector.

Considerations and Recommendations

There is little question that the trucking industry has adapted well to the market structure that has emerged over the past decade. Transport Canada reports that total factor productivity in the industry increased by an average of 2% a year between 1994 and 1999. Industry observers warn, however, that productivity gains have resulted mainly from deregulation (increased competition, rationalization of operations, market expansion) and that at best, gains may have hit a plateau; at worst, they may erode.

The private sector should be actively pursuing new frontiers in transport logistics, including better integration in supply chain management and information technology (a subject discussed at greater length in Chapter 16). The public sector has a critical role in facilitating the application and adaptability of information technology and intelligent transportation systems. Governments must also ensure that the remnants of outmoded regulatory regimes do not hinder the efficiency and competitiveness of the trucking industry.

While the National Transportation Act Review Commission was conducting its work in 1992, the trucking industry faced considerable financial difficulties. In its concluding remarks, NTARC predicted that "the performance of the Canadian trucking industry will improve with economic recovery." In this regard, the Panel notes the trucking industry's very strong performance in the North American market since the mid-1990s.

The Panel also acknowledges the collective efforts of the federal government and the provinces/territories in promoting the compatibility of standards and regulations within NAFTA. The Panel notes with some concern, however, that the lack of uniformity in trucking regulations among Canadian jurisdictions — cited in the NTARC report nearly a decade ago — remains an issue in search of effective resolution.

Although it is important, and indeed necessary, for the federal role to complement provincial/territorial regulation, mechanisms to ensure that extra-provincial carriers are treated consistently across jurisdictions warrant re-evaluation.

The multitude of jurisdictional influences on different aspects of the trucking sector create a risk of fragmented regulatory oversight. The critical role of trucking in the economy requires a stable industry. To ensure continued competitive viability on a North American scale,

> **Recommendation 15.1**
> **The Panel recommends that federal, provincial and territorial governments collectively recognize the need for a cohesive framework to govern the multiple elements of the trucking sector.**
>
> **The Panel recommends further that jurisdictions establish a time frame for developing and implementing an effective framework to govern all elements of the trucking industry.**

Notes

[1] Canadian policy was announced in Environment Canada, "Providing Clean Air to Canadians", 19 February 2001.

[2] ICF Consulting, "North American Trade and Transportation Corridors: Environmental Impacts and Mitigation Strategies", prepared for the North American Commission for Environmental Cooperation, Montreal, February 21, 2001.

Chapter 16
The Impact of E-Business on Transportation

Information technology and the Internet have revolutionized the way companies do business. They have changed the way organizations operate by enabling the re-engineering of sourcing, production and logistics processes. The Panel was asked to consider "the extent to which the current policy and legislative framework supports the efforts of Canadian transportation players to adapt to the new e-business environment and to meet global logistics requirements."

Electronic business and the Internet have begun to influence the demand for transport, the means by which transport is produced, and the market structure of transport:

- **E-business can diminish or transform the demand for transport by 'dematerializing' physical products (reducing their size and weight or shifting them from actual to digital products).**
- **E-business can improve supply chain management and create new distribution patterns through on-line selling — influencing transport services with respect to what, how much, when and where they are required.**
- **Transportation firms can use e-technology to improve internal business processes, customer relationship management, procurement and supply chain co-ordination.**
- **The Internet enables the growth of market exchanges or electronic marketplaces that provide a new medium for shippers to buy and carriers to sell transportation.**

Electronic business is any commercial transaction carried out, facilitated or enabled by the electronic exchange of information — via the Internet, electronic data interchange, intranets, dedicated telecommunications or e-mail. Transactions can be buying and selling, serving customers, collaborating with business partners, or administrative transactions. Transactions can be internal to a company and affect the internal supply chain process, or be across firms, affecting external supply chain processes. Electronic transactions that involve the change of ownership (purchase or sale) of a product or service are known as **electronic commerce**.

Use of Electronic Data Interchange and the Internet
CTAR Survey of Shippers, 2001

Table 16.1

Electronic data interchange

	Use EDI %	Plan EDI %	DK/NA* %	Total responses
With product and material suppliers	36	20	44	162
With transportation service providers	39	17	44	163
Within your company	39	17	44	163
With business customers	53	12	35	178
With final consumers	26	12	62	149
With government	23	9	68	142

Internet

	Use Internet	Plan Internet	DK/NA*	Total responses
With product and material suppliers	60	16	24	172
With transportation service providers	60	18	23	177
Within your company	76	4	20	192
With business customers	63	18	19	180
With final consumers	45	14	41	155
With government	43	9	48	149

*Don't know not applicable

In short, e-business presents both opportunities and challenges for Canadian transportation: opportunities to improve service, increase productivity and reduce cost, and challenges as it creates new supply chain requirements and capabilities and new marketplaces with particular demands.

Current E-Business Use

Statistics Canada reports that 52.8% of Canadian companies, accounting for 75.4% of the economic activity of the private sector, used the Internet to conduct business in 1999. The Panel's survey of shippers showed the importance of e-business in the transport sector and the significance of the Internet in these transactions (Table 16.1), although as discussed later in the chapter, use varies significantly between and within the rail, air, marine, and trucking sectors.

How E-Business Affects Transportation

Managing the supply chain — all the firms and processes involved in producing and delivering a product — involves planning, execution and control of these processes to deliver products at the lowest cost. At the same time, the need to be responsive to customer demand — just in time delivery, make to order manufacturing systems, and so on — results in the movement of smaller quantities of goods more frequently. E-business technology enables logistics and supply chain managers to meet these demands by integrating systems, collaborating within and across firms, and sharing information throughout the supply chain, enabling supply chain participants to plan and synchronize their processes.

As one of the most crucial supply chain processes, accounting for 60% of total logistics costs, transportation has to support business generated electronically. Transportation has a significant influence on the speed and reliability of the order cycle and the quality of the customer experience. As critical supply chain members, transportation suppliers must be able to function as partners, to produce, share and manage information and to provide higher levels of service in terms of speed and reliability. They have to be able to trace and track shipments under their control and make the information readily accessible to customers or supply chain partners. When transportation or logistics services companies can provide real-time information in a customized way, they can become an integral part of their customers' supply chains, creating the opportunity to secure long-term business by embedding their processes in those of their customers and adding value beyond traditional transportation and logistics offerings.

Each development enabled or facilitated by electronic technology and the Internet — integrative and collaborative supply chain strategies, logistical process improvements, electronic procurement, on-line retailing and so on -- has potential effects on the freight transport sector, including changes in demand, service requirements, capability requirements, and mode shifts.

Transport Demand

Among the potential changes in the demand for transportation services resulting from widespread adoption of e-business are the following:

- Dematerialization — the long-standing trend toward smaller and lighter products — reduces the demand for the transport of products that can be digitized, particularly paper products containing information, with a direct impact on transporters of paper products and materials in the paper supply chain, including postal services.

- On-line retailing and supply chain management strategies that reduce the need to hold large inventories also reduce the risk that products need to be returned, subsequently reducing transportation demand. Transport demand is also dampened by process improvements such as direct shipping and levelling of shipments. E-procurement reduces demand by trading rather than moving products.
- E-procurement facilitates global sourcing, potentially increasing transportation demand by lengthening the distances from which products are sourced.

Service Requirements

To meet the demands of e-business and global logistics, transportation services providers need to be prepared to meet new service requirements such as these:

- On-line retailing and supply chain management strategies that pull products through the chain instead of pushing them increase the demand for delivery of smaller quantities more frequently.
- On-line retailing also changes the destination of these deliveries to residential areas at times other than normal working hours.
- On the other hand, e-procurement can result in greater consolidation by shippers, while supply chain process improvements allow better planning. This results in fewer rush shipments and more larger shipments.
- Pull systems and on-line retailing are demand-responsive, so speed, reliability and flexibility are valued service characteristics. Many carriers will be chosen for their ability to provide these aspects of service (small shipments, fast, reliable) and to minimize costs through consolidation and cross-docking of freight.
- Transportation inputs may be substituted for inventory inputs in the logistics system by using faster and more reliable transport (to reduce contingency stocks) or more long-distance transport (to centralize inventory and reduce stock).

Transport Capability

Meeting these service requirements will change the capabilities demanded of transport companies by shippers using e-business and related technologies:

- To participate in supply chains that achieve the benefits offered by e-business, carriers need new capabilities with respect to information technology. The ability to provide and share information on shipment and equipment visibility in real time to many supply chain partners is becoming more important; for many shippers it is a basic criterion in selecting carriers.
- To participate in Internet-based supply chains, carriers must be web-enabled as well, so they can share information and perform transactions such as selling their services on-line and providing shipment status information.

Mode Shifts

Widespread adoption of e-business also has the potential to induce mode shifts in transportation choices. For example:

- Pull supply chain strategies, centralization of inventory, on-line retailing and a trend toward bypassing intermediaries generally result in shifting large shipment movements over long distances to smaller shipment movements. This may mean a shifting of freight movement from rail to truck and, within truck, from truckload to less-than-truckload and from less-than-truckload to parcel/courier service.
- These same forces place a premium on transport modes that are inherently faster and more reliable. Again this shifts transport demand toward parcel/courier from less-than-truckload or toward truckload from rail. On the air side, the potential shift may be from traditional air cargo consolidated by third parties to direct supplier-customer relationships using air express services.
- On-line retailing potentially substitutes local truck delivery of multiple shipments for multiple shopping trips in passenger vehicles (although evidence to date suggests on-line retailing is an adjunct rather than substitute for existing retail store operations).
- Co-ordinated industry-wide electronic procurement could shift freight from parcel/courier to less-than-truckload and from less-than-truckload

to truckload, as a result of better consolidation and planning. Global sourcing will shift traffic from domestic to international carriers.

How these general trends translate into actual effects on transportation will vary by market, industry and individual customer. To plan their own service offerings and e-business strategy, carriers will have to analyze how the Internet is going to influence their customers' supply chain decisions, retail strategies, and fundamental demand.

E-Business Applications in Transportation

Marine Sector

The marine sector — shipping lines, ports, service providers at ports, and connecting surface or air transportation providers — believe that e-business will be critical in their current and/or future success, but actual adoption of e-business systems is spotty. To date, the main use by marine carriers is in tracking and tracing cargo, although electronic document exchange with ports and customs is increasing.

The Panel's survey of shippers showed that about 25% of Canadian shippers using marine transport also use e-business to deal with marine carriers. Most of these shippers (68%) are satisfied with their ability to conduct transactions with carriers over the Internet for container traffic, with bulk cargo shippers being slightly less satisfied.

Ports are often seen as the main focus for expanding e-business in this sector, because they are in the best position to collect and disseminate information used by multiple members of the international supply chain. Instead of making numerous one-to-one contacts, a participant can get all information from a single source. The Port of Vancouver, for instance, uses the Internet to provide information on vessel tracking, container terminal scheduling, vessel arrival, and turnaround management. Some international carriers, although competing with each other, have established common portals for information on schedules, bookings and related information.

Some Canadian carriers have invested heavily in information technologies, but many firms in the marine sector cannot justify the investment, given current profit margins. Other barriers to using e-business in this sector include lack of awareness; attachment to legacy systems and traditional practices; skills shortages and inadequate access to technical training, especially among smaller firms; information security concerns; and lack of appropriate technology to meet company-specific needs.

Some of these barriers are created or worsened by inadequate participation, co-ordination and collaboration among participants in the marine based supply chain — along with traditional reluctance to rely on partnerships and alliances as a means of business development.

Aviation

E-business practices developed earlier and more comprehensively in the air transport sector than in other modes for several reasons: there are fewer carriers relative to other modes, many individual ticket and reservation transactions to be managed, and a long-standing relationship between carriers and travel agents that requires good communications and real-time information transfers. The capabilities of reservation systems — and the large amounts of data they generate — also permitted development of yield management systems, now being emulated in other modes. Predating e-business and based originally on real-time transactions by telephone, reservation and yield management systems are now being made faster and cheaper by the Internet. The relationship between carriers and travel agents remains important, but on-line air travel portals are developing rapidly and reducing carrier and user costs.

Air transportation applications of e-business include

- business-to-customer transfer of schedules, fares and other service information, as well as on-line reservations, sales and ticketing;
- business-to-customer marketing, including distribution of general promotional information and advisory notices of special offerings, which have become important tools in yield management;
- business-to-business transactions for interlining, network and schedule co-ordination (including managing alliances);
- carrier-to-airport exchanges for co-ordination, management of airport operations and billing; and
- business-to-business dealings for airline procurement of supplies and services.

In the air cargo sector, the results of the Panel's survey of shippers showed that among those using air freight services, 34% used e-business. Carriers, through their world association, are already implementing a paperless air waybill initiative. Involving several international carriers and scheduled for completion in June 2002, the initiative is expected to clear the way for using electronic waybills throughout the industry. This is expected to speed up data transmission and significantly reduce the possibility of errors, lowering costs for both carriers and freight forwarders. Concern remains, however, about the lack of international agreement on standards.

Trucking

The Panel's survey of shippers showed clear consensus on the importance of e-business in maintaining a competitive edge. For motor carriers, the benefits lie in greater efficiency and customer satisfaction, but these benefits are far from being realized in this fragmented sector, particularly among medium-sized and small trucking firms. E-business applications in this mode may be of particular benefit in improving equipment utilization and reducing empty running through better matching of carrier supply and demand.

The overwhelming majority of trucking firms are using some form of information technology in business operations, including equipment and load management through improved communications. In addition, satellite-assisted navigation and communication are becoming increasingly valuable in monitoring the status and location of shipments and equipment. But most companies are not yet using the Internet to its full potential. In most cases, the barrier appears to be customer readiness, with cost as the second most significant obstacle. Some carriers also cite information security issues, technology limitations, and lack of internal expertise.

In short, firms appear to be testing the waters on an individual basis, investing where near-term benefits appear possible. The cautious approach reflects the nature of the trucking industry — fragmented, fiercely competitive and operating on very low margins. The e-business revolution in this industry will be slow but could accelerate as customers retool to take advantage of carriers' expanding e-business capabilities.

Freight Forwarding

Freight forwarders and other logistics providers are increasing their presence in the supply chain. As intermediaries they have to integrate their activities with those of both shippers and carriers and thus need accurate, real-time information and instantaneous communication and information sharing with both parties.

Forwarders use e-business for shipping schedules, rate information, on-line booking systems, cargo tracking, electronic payment, and bill of lading exchange. Additional internal uses include carrier performance records, documentation storage and retrieval, and pick-up/delivery information.

Barriers to implementation are similar to those in other sectors: cost, a fragmented industry, partner compliance and a traditional reliance on paper transactions.

Railways

Canadian railways acknowledge the importance of e-business, but they also recognize that their main priority is to increase service reliability and speed.

CN has generally developed e-business applications internally and is often the first to market with e-business innovations in the rail industry. CPR has generally adopted best-of-breed applications developed by other railways and proponents of marketplace and industry solutions. Both carriers appear well poised to take advantage of e-procurement and to participate in electronic marketplaces or exchanges as they become more common.

Regional railways generally lack the resources to pursue e-business opportunities internally. They seek to leverage industry initiatives where possible or focus their efforts on a few initiatives customized to their situation. BC Rail, for example, is developing customized e-commerce packages for selected customers but this will cover almost 80% of its business. The short lines have the fewest resources and least capacity to adopt a cohesive e-business strategy and have minimal Internet capabilities.

The Panel's survey of shippers showed high levels of satisfaction with the ability to perform transactions over the Internet. Satisfaction was higher for intermodal service, which is the more competitive arena. Railroad performance in meeting shipper expectations about Internet readiness improved substantially from 1995, with more than 60% of shippers indicating that they were more satisfied in 2000 than in 1995.

At the same time, wider use of e-business in the rail sector faces several barriers:

- Insufficient customer and supplier readiness or attachment to legacy systems, reducing the seamlessness of information throughout the supply chain.

- Gaps in the supply chain — where a carrier or carriers are not using the Internet — create 'black holes' in shipment information.
- Standardized procedures and data formats increase shippers' ability to move from one railway to another, increasing competitive pressure on individual railways, so companies will have to decide, individually and collectively, what industry-wide applications should be created. A reasonable criterion might be to adopt standards that increase rail competitiveness for intermodal traffic. Without this, the capacity to co-ordinate across railways and offer shippers seamless service will be compromised, especially in intermodal markets.
- Collaboration between railways remains foreign to the culture of many companies, especially where potentially sensitive commercial data are involved.

Considerations and Recommendations

Government has an important interest in the progress of e-business in the transportation industry. Adoption of e-business by shippers and carriers — a process whose scope and complexity are only hinted at in this chapter — has implications not only for the market structure of the transportation industry and its overall productivity, but also for energy use, the environment, safety and economic development. Government can encourage a transportation system that will promote, rather than constrain, the growth of e-business and the benefits it offers: better planning and co-ordination, resulting in greater efficiency in vehicle use. Better vehicle utilization in turn reduces the number of trips and vehicle kilometres travelled, energy used, and pollutants emitted.

Improved vehicle productivity directly reduces the cost of producing and delivering a product to consumers. Coupled with the benefits of supply chain and service improvements, there is substantial evidence to support a role for government in encouraging transport firms to adopt new information technology. If information technology and the e-business processes it enables are catalysts for economic growth, governments have an interest in promoting greater use of digital commerce in core sectors such as transport.

Government also has an interest in the viability and competitiveness of the transportation industry as a whole. Transport providers (including both carriers and infrastructure, such as ports) compete with U.S. transport firms in the transborder and international markets. Healthy competition between carriers ensures long-run efficiency in the supply of transport services to Canadian shippers.

The outcomes for the environment and safety are of prime interest to governments but are not easy to foresee. Overall, the outcome will depend on the aggregate effects of greater transport demand, resulting from substitution of transport for other inputs; economies in transport achieved through dematerialization and internal transport operations efficiencies; and the longer-term effects on locations of production and use of products. Governments will need to ensure that policies are adapted as these effects develop, to ensure that their sustainable development goals continue to be met.

Barriers to E-Business Adoption

Barriers to e-business in specific sectors were discussed earlier in the chapter. Barriers common to more than one sector include the following:

- **Cost** can prevent any firm from adopting Internet technology more extensively, but this is especially true in the marine and trucking sectors. It is easy to identify costs but harder to estimate benefits, making the return on these investments difficult to quantify. The low margins and small size of many marine and truck industry participants make it difficult to commit limited resources on a multi-year basis to risky projects. Resources are also a constraining factor for short lines and regional railroads.
- Many marine and rail industry participants already have electronic data transfer and other **legacy information systems** in place, reducing the commercial benefits of adopting more accessible Internet-based systems. Many EDI applications involve the carriers' largest customers, so the benefits must come from new customers not currently linked by EDI.
- Much of the uncertainty about potential benefits arises from inadequate **customer readiness** to use Internet-based innovations. This is the dominant barrier for trucking firms but still important for marine and rail.
- Lack of action by all participants in the supply chain is also an issue in the rail and marine sectors. This is a natural barrier, given that multiple firms are typically involved in transporting goods in each of these modes. **Slow adoption** by some supply chain members reduces the benefits of quick adoption by others.

- **Interoperability** between logistics providers is a problem in the marine and rail sectors. The presence of multiple information platforms and absence of common protocols prevent carriers from sharing information seamlessly.
- Insufficient interoperability also arises from **shipper demands** for specific formats and methods of communication. The cost of using different formats effectively limits the response to a few high-volume customers. This is a problem for all modes and trucking in particular.
- Inadequate **technical skills and training** are barriers among the smaller firms in the marine and trucking industries.
- **Security** and protecting commercially sensitive information is also a concern across modes, especially when the information is shared with potential competitors.
- Finally **organizational culture** and traditional practices, in both carrier and partner firms, are key factors to overcome when proposing or implementing new technology. Internally, any form of automation may be resisted; externally, the collaborative approach inherent in e-business may be difficult to achieve.

Recognizing the productivity gains possible from greater use of e-business, governments have several options to help overcome internal and industry barriers to greater use of e-business in the marine, truck and rail industries.

- **Promoting awareness** of the benefits of e-business through education and information programs.

This would be especially useful in the rail and marine sectors where there is a diversity of participants in the supply chain and collaboration between different participants is essential. Where knowledge and appreciation of the benefits are lacking, government's role could be to provide information companies need to make informed decisions. The Panel understands, for example, that Transport Canada is already supporting an assessment and information package on e-business for the trucking industry.

- **Encouraging education and skills training** needed to work with e-business applications — for both technical personnel and the general workforce.

One of the challenges facing industry is the availability of trained technical staff to implement the technology behind e-business. Funding to promote development and expansion of technology training programs could provide a stimulus for Canadian industry to keep pace or even set the pace in adopting e-business in transport and other sectors. A web-enabled workforce gives Canadian industry a significant competitive advantage. The need for specialized training initiatives — customized to specific transport industry segments — should also be examined.

- The federal government, in its role as facilitator of transportation and trade, could serve as a focal point to bring interested parties together and foster development of an **industry strategy on e-business**.

Such a strategy is less likely to be needed in the rail industry, but it is much needed in the marine and truck sectors, which are much more fragmented and composed of a mix of small and large companies. The government is in a good position to initiate the process as a neutral party that can bring shippers into the process as well. This is critical, since customer use of e-business techniques is key to success.

> **Recommendation 16.1**
> **The Panel recommends the establishment of a co-operative program with the national carrier associations in all modes to facilitate and encourage the development of e-business and e-commerce skills and training in the application of the technologies.**

- **Facilitate expansion and acceptance** of e-business by continuing to develop e-government as an example for industry.

Streamlining compliance with regulatory functions such as vehicle registrations and border clearance are attractive potential benefits for transportation firms that adopt e-business. The federal government may be able to provide leadership in this area, for example, by co-ordinating federal government activities using e-business, including those of Transport Canada, the Canada Customs and Revenue Agency, Industry Canada and other government agencies — to provide single-window access for users. To encourage standardization and common protocols, government can lead by example, adopting common standards across government departments. Federal leadership is also needed to deal with similar concerns about standardization and common protocols at Canada-U.S. border crossings and harmonization with highway monitoring systems being developed and introduced throughout the United States.

The government could also ensure that real-time access to government-produced information is available — including weather charts, ice information and water levels used in advanced ship management systems.

> **Recommendation 16.2**
> **The Panel recommends that the government continue to develop e-government initiatives aimed at streamlining both internal and government/industry communication processes.**

The Panel is not advising industry to wait for government to begin the process. Marketplace imperatives and customer demands are the only incentive carriers should need to adopt the systems that will enable them to capture the benefits of e-business. At the same time, e-business and the Internet offer tools to facilitate effective co-ordination between the many disparate partners needed to make the transportation system work seamlessly, efficiently and effectively. Government has an opportunity to participate in the process by setting an example through its own approach to e-government and by bringing industry participants together to develop their own sector-specific strategies.

Notes

This chapter draws on the following research prepared for the Panel:

Garland Chow, "A Framework for Analyzing the Impact of E-Business on Transportation", paper prepared for CTAR, May 2001.

HLB Decision Economics Inc., "Relationship between E-business, Advanced Transportation Logistics, and Canadian Industrial Economic Performance", paper prepared for CTAR, April 2001.

Chapter 17
The Environment and Sustainable Development

The terms of reference asked the Panel to consider the extent to which the current legislative and regulatory framework gives the government the necessary powers to support sustainable development objectives. Many submissions to the Panel indicated that sustainability in transportation, notably in resource use and its environmental impact, is becoming of widespread concern. Several participants in the Panel's consultations, including non-governmental organizations, pointed to the need to consider environmental impact and energy use in transport policy, especially in light of Canada's commitments under the UN Framework Convention on Climate Change (1992), including the Kyoto Protocol (1997).

Although the future of the Protocol is uncertain, the Panel expects that reducing greenhouse gas emissions will continue to be a key issue for transportation and sustainable development in Canada and the world. Some interveners argued for government action, such as appropriate road pricing, to induce behavioural changes that would reduce the environmental impact of transportation. Some proposed amending the *Canada Transportation Act*, in particular the section 5 declaration of national transportation policy, to incorporate sustainable development.

The Concept of Sustainable Development

Sustainable development recognizes that, without a growing economy, it is difficult to support wise resource use and sound environmental management. At the same time, without a clean environment and a productive resource base, the economy cannot be strong over the long run. The World Commission on the Environment and Development (the Brundtland Commission) defined the concept as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[1] This implies that resource exploitation, investment decisions, the orientation of technological development, and institutional change are consistent with future as well as present needs. The government of Canada has adopted the Brundtland Commission's definition of sustainable development, and the definition is integrated with the sustainable development strategies of federal departments.

Sustainable development is a key priority of federal government departments. The January 2001 speech from the throne emphasized the importance of the environment and sustainable development:

> A healthy environment is an essential part of a sustainable economy and our quality of life… As part of its efforts to promote global sustainable development, the Government will ensure that Canada does its part to reduce greenhouse gas emissions. It will work with its provincial and territorial partners to implement the recently announced first national business plan on climate change.

Transportation and Sustainable Development

Canadians expect a safe, efficient transportation system, but they also want to protect the natural environment. Notwithstanding the many economic and social benefits of transportation, moving people and goods has significant environmental consequences. These effects generate social and economic costs, such as higher health care expenses and clean-up costs. Exhaust emissions, for instance, contribute not only to urban air pollution, but also to acid rain and probably to climate change. Transportation also affects Canadians' safety and overall health. Motor vehicle accidents account for nearly half the accidental deaths in Canada each year, while smog contributes to a wide range of health effects. Several major environmental stresses resulting from transportation are summarized in Table 17.1.

Key Trends

Energy Use

The transportation sector remains the single largest energy user in Canada, accounting for 35% of total energy use in 1999. This was a 2.5% increase over 1998. Between 1990 and 1999, total energy consumption in Canada increased by 12%, with energy demand growing fastest in the transportation sector — by 26%.

Within the transportation sector, road vehicles account for 72% of total energy consumption, followed by pipelines at 11%, aviation at 9%, marine at 5% and rail at 3%. Road transport accounts for 81% of petroleum used.

Transportation and Associated Environmental Stresses

Table [illegible]

Environmental stress	Contributes to
Exhaust emissions	
Nitrogen oxides, volatile organic compounds, carbon dioxide, other toxics	Urban air pollution, smog, climate change, acid rain, health effects
Spills and leaks	
Fuel, oil and other material leakage, spills, solid and hazardous waste by-products	Contamination of land, surface water and groundwater, release of chlorofluorocarbons, depletion of stratospheric ozone
Energy use	
Consumption of large amounts of fossil fuels	Depletion of non-renewable natural resources
Land use	
Extensive land requirements (especially road transport), rights of way through sensitive areas	Conversion of agricultural land, disruption of habitat, congestion, disruption of communities
Other	
Accidents, noise, congestion	Human stress, injuries, fatalities

Source: Transport Canada, *Sustainable Development Strategy 2001–2003*, p. 15 (drawing on Environment Canada, *National Environmental Indicator Series*, 1998).

Transportation energy use is expected to rise by more than 50% between 1990 and 2020, with major increases in the demand for gasoline, diesel and aviation fuels.

Greenhouse Gas Emissions

Global warming has become the most pressing and contentious international issue related to the sustainability of the current rate of development. Although current capacity to quantify the human influence on global climate change is limited, evidence suggests that this influence is discernible. The main contributors are judged to be emissions of greenhouse gases from the production and consumption of fossil fuels (mostly coal, oil, and natural gas). Transportation is the single largest contributor of greenhouse gas emissions (GHGs), accounting for about 25% of Canada's total emissions in 1997. The sector also accounted for the largest share of the growth of emissions between 1990 and 1997.

Greenhouse Gas Emission Trends and Forecasts 1990–2020 Table 17.[illegible]

millions of tonnes CO_2-equivalent

	1990	1997	2010	2020
Road Transport	123.7	146.4	165.7	191.8
Rail	7.1	6.4	7.1	7.4
Aviation (Canadian carriers)	10.6	13.0	17.6	21.1
Marine	6.1	6.2	7.0	7.4
Total Transport	**147.5**	**172.0**	**197.4**	**227.7**
Total Canada	**601.0**	**682.0**	**764.0**	**845.0**

Source: National Climate Change Strategy Development, Analysis and Modelling Group, Canada's Emissions Outlook: An Update, December 1999.

Transportation benefited profoundly from improvements in energy efficiency in the 1980s. Between 1980 and 1990, new car and light truck fuel efficiency improved by 20%, and total GHGs from transportation showed zero growth. Between 1990 and 1997, however, the trend reversed as efficiency gains slowed, were absorbed by purchases of larger, more powerful vehicles, and were overtaken by general growth in passenger vehicle use.

As shown in Table 17.2, the transportation sector emitted 147.5 Mt of CO_2-equivalent GHGs in 1990 and 172 Mt in 1997, or about 16% above 1990 levels. Road transport accounted for two-thirds of the transportation total. In the absence of new policies or pricing changes, transportation GHG emissions would increase to 197.4 Mt in 2010 and 227.7 Mt in 2020, compared to 147.5 Mt in 1990.

Passenger cars and aviation will account for most of the increase; they generate more emissions per passenger-kilometre than most alternatives. For example, in 1997 urban automobile use produced an estimated average of 215 grams of GHG emissions per passenger-kilometre and domestic aviation 150 grams, compared to 77 grams for urban transit and 26 grams for intercity bus.[2]

Existing Policy and Legislation

Climate Change Strategy

Canada ratified the UN Framework Convention on Climate Change in 1992, agreeing to reduce greenhouse gas emissions. In December 1997, Canada and other developed countries negotiated the Kyoto Protocol to the Convention. If ratified, the Protocol would commit Canada to reducing its greenhouse gas emissions to 6% below 1990 levels during the five-year period 2008–2012. If current trends continue, however, GHG emissions from transportation are expected to *exceed* 1990 levels by 32% by 2010 and 53% by 2020.

In response to the Protocol, and as part of a national process to develop measures to address climate change, Canada established 16 'issue tables', involving 450 experts from industry, academia, non-governmental organizations and municipalities, and federal, provincial and territorial governments. The Transportation Table completed an options paper in November 1999, which assessed over 100 potential measures to reduce emissions from transportation.

The two-year national climate change process produced Canada's National Implementation Strategy on Climate Change, released in October 2000. As part of the strategy, federal, provincial and territorial governments agreed to develop a series of national business plans outlining concrete steps they will take — individually, collectively and in partnership — in all sectors of the economy to respond to climate change. Business plans cover a three-year planning horizon and are updated annually. The ministers of Energy and the Environment released the first national plan in September 2000.

The Transportation Table analyzed and ranked potential emissions-reducing actions. A package of 'most promising' measures was identified, based on cost-effectiveness (dollars per tonne of GHG emissions reduction) and anticipated public acceptability. They included enforcement of speed limits, driver training, telecommuting and car sharing, as well as some aircraft and air navigation improvements. Together, it was predicted they would reduce transport GHG emissions by about 5% by 2010. A further package of 'promising' measures was expected to be able to achieve at least another 10% reduction, including fuel consumption targets for new passenger cars and light trucks, urban transit service improvements and pricing subsidies, automatic truck speed control, and a variety of other innovations in fuels, vehicles, and infrastructure.[3]

Transport Canada intends to pursue development of the most promising measures, using funds allocated for further evaluations and demonstrations as the federal contribution to the business plans. On October 18, 2000, the Minister of Finance announced funding of $500 million over the next five years to implement *Action Plan 2000 on Climate Change*. This builds on the

$625 million announced in the 2000 federal budget. The plan includes five developmental measures in transportation: new vehicle fuel efficiency; community transport pilot projects; freight efficiency and technologies; ethanol support; and fuel cell partnerships.

Pricing measures are notably absent from the announced plan. The Transportation Table analyzed pricing measures to deter road vehicle use, notably fuel tax surcharges, and demonstrated their potential efficacy. Although the Table recognized the conceptual arguments for internalizing the external costs of road use, it could not achieve universal support for any direct pricing measures among its members, which included representatives of the main groups of road users. The national cross-sectoral analysis has also been wary of considering government pricing measures, notably ruling out a 'carbon tax' on all emissions. However, the alternative of creating an efficient and market-based system of tradable emissions permits remains under serious consideration.[4] Although the Panel does not wish to comment on the options for a cross-sectoral Climate Change Strategy, our advice is that no strategy in transportation can be effective unless incentives to lower emissions are reinforced by disincentives to fossil fuel use and emissions.

Sustainable Development Strategies

The federal government also has legislative authority with respect to sustainable development and its own departments through the *Auditor General Act*, which was amended in 1995 to establish a Commissioner of the Environment and Sustainable Development within the Office of the Auditor General. Departments must now prepare sustainable development strategies and update them every three years. Twenty-eight departments, including Transport Canada, tabled their initial sustainable development strategies in 1997 and updated strategies in December 2000.

Transport Canada outlines seven strategic challenges in addressing sustainable development:

- improving education and awareness of sustainable transportation;
- developing tools for better decision making;
- promoting the adoption of sustainable transportation technology;
- improving environmental management for Transport Canada operations and lands;
- reducing air emissions;

- reducing pollution of water; and
- promoting efficient transportation.

The Department has established objectives and plans and identified performance objectives for each.[5]

According to the Commissioner of the Environment and Sustainable Development, federal departments overall reached just 11% of their sustainable development goals in 1998 and 20% in 1999. Departments also failed to establish clear measurable targets to assess their success in achieving sustainable development goals. Strategies tended to focus more on past accomplishments than on future directions. Transport Canada was identified as one of three departments that have been slow in making progress toward measuring performance.

Powers and Instruments for Meeting Sustainable Development Objectives in Transportation

Legislative Powers

The federal government shares responsibility for the legal framework governing environmental protection. Most aspects are under provincial/territorial or municipal jurisdiction. Federal legislation applies to the operation of federal facilities and (under constitutional authority for trade and commerce) to performance standards for new vehicles or craft, but not to the operations of road carriers or private road users, which are provincial responsibilities. The federal government can also regulate vehicle emissions, fuel composition, and toxics through the *Canadian Environmental Protection Act, 1999* and has historically worked on fuel specification guidelines that are subsequently adopted in most provinces.

Sustainable development has also been integrated into other federal legislation, including the *Canadian Environmental Protection Act, 1999*, the *Canadian Environmental Assessment Act*, the *Oceans Act*, the *Department of Industry Act*, and the *Department of Natural Resources Act*.

While the *Canada Transportation Act* does not address environmental protection, Transport Canada has authority to regulate environmental emissions and damage from certain types of operations and equipment. The department regulates pollution from aircraft, ships and railways, for example. It also regulates water pollution from ships, through the *Canada Shipping Act* and the *Arctic Waters Pollution Prevention Act*. Further, Transport Canada administers the *Transportation of Dangerous Goods Act, 1992*. The department shares some of these regulatory responsibilities with other departments.

Working in Partnership

Sustainable development is a shared responsibility. Strong and effective partnerships are therefore critical, particularly among federal departments and with provincial, territorial and municipal governments. The Commissioner of the Environment and Sustainable Development notes that "in areas of shared jurisdiction such as the environment and sustainable development, co-operation agreements are the best way for participants to achieve their goals." Transport Canada agrees that strong and effective partnerships are critical, particularly with other federal departments and other governments.[6]

The Climate Change strategy for reducing greenhouse gas emissions is one such co-operative effort. Another is the national NO_x/VOC reduction strategy, designed by the Council of Ministers of the Environment, with targets for emission reductions, including from transportation sources.

A further example of a co-ordinated approach is the Memorandum of Understanding on Science and Technology for Sustainable Development in the natural resources sector, which has facilitated joint priority setting, joint science assessments, and research studies among five federal departments (Agriculture and Agri-Food Canada, Environment Canada, Fisheries and Oceans Canada, Health Canada, and Natural Resources Canada).

Transport Canada has co-operative relationships with other federal departments — for example, with Fisheries and Oceans to prevent, detect and respond to marine pollution incidents, through a national marine spill preparedness and response system. Transport Canada and Natural Resources Canada share analysis and policy development for energy efficiency in the transport sector. With passage of the *Canadian Environmental Protection Act, 1999*, Environment Canada has taken over from Transport Canada as the authority regulating motor vehicle emissions, as well as on-road and off-road engines and fuels. Several submissions to the Panel, as well as to the Climate Change Strategy development process, recommended a more co-ordinated approach across departmental portfolios and emphasized that clearer responsibility and accountability are essential if the federal government's environmental objectives are to be achieved.

Financial and Fiscal Instruments

The federal government can make a significant difference to sustainable development as the country's single largest employer, landlord and purchaser. The federal spending power also allows direct funding to environmental protection initiatives. Environment Canada's Green Plan and the current budgetary allocations to climate change measures are prominent examples. The Canada Infrastructure Program is also directed in part to environmental protection, giving priority to investments in improved municipal water quality and to urban transit vehicles using alternative fuels (though not to other transit or transport efficiency improvements).

In the United States, where jurisdiction is divided among three levels of government, the federal government has chosen to use its funding power — and a much larger financial commitment in relative terms — to induce action by the other levels of government on environmental protection. Funding under *Transportation Equity Act for the 21st Century*, disbursing more than $200 billion for transportation over six years, is tied in part to recipient governments meeting environmental criteria.[7] In Canada the federal government has not used this type of lever.

The other potential instrument is federal taxing powers, including personal and corporate income tax — and notably the ability to exempt or tax various payments or receipts. Capital cost allowances for transport equipment are a pertinent example, as there are competing claims that various types of vehicles or craft receive favourable allowances, distorting modal competition. Another example is the treatment of benefits commonly provided by employers in the form of subsidized parking; technically this is a taxable benefit, but it is rarely enforced and arguably therefore stimulates excessive car use and a mode shift from urban transit.

The most prominent tax instrument is of course the federal fuel excise tax, which effectively acts as part of transport pricing and offers the potential to contribute to the cost of infrastructure, to internalize the social costs of transport, or otherwise to induce changes in traffic or mode choice. The recommendations in Chapters 10, 11 and 12 make clear the Panel's position on the use of federal fuel taxes.

Considerations and Recommendations

The terms of reference asked the Panel to consider the extent to which the current framework gives the government the necessary powers to support sustainable development objectives. The Panel's assessment is that the legislative powers exist to permit appropriate action in areas of clear federal responsibility: planning and operation of federal facilities and achieving standards for emissions, fuel consumption, and safety of vehicles and craft.

There are important constitutional and political limitations, however, on independent federal action to achieve national objectives for sustainable development in transportation. Co-operation among governments is therefore essential — for example to reach such key national objectives as reducing greenhouse gas emissions and urban air emissions. In both cases, the federal government has been unable to meet its announced goals, mainly because of its inability to persuade other levels of government to participate in co-ordinated programs and their funding.

The integrated strategy the Panel proposes would offer an opportunity to break the logjam, finally translating into action government commitments to a national policy of sustainable transportation. Two measures in particular offer the promise of unprecedented progress. They are the Panel's proposals for

- charging directly for road use, with charges eventually to include a component for environmental costs (Chapter 10), and
- permitting urban transit and other modes to compete with roads for investment funds (Chapters 11 and 12).

Adopting these proposals would remove major impediments to achieving the appropriate balance between modes in infrastructure investment and use. Indeed, addressing environmental damage from transportation is among the Panel's principal goals in proposing these strategies.

These measures could be expected to have direct effects on most of the stresses identified in Table 17.1, because reduced vehicle use — combined with purchases of more energy-efficient vehicles and shifts to public transit — would lower energy use, air-polluting emissions, greenhouse gas emissions, congestion, noise and accidents. In the longer term, taking these steps could also be expected to promote more intensive land use and to reduce transportation infrastructure requirements.

The Panel's proposals rely on correct road pricing to play the central role, but this does not mean that other sustainable development policies and programs — notably traffic management, public information dissemination and land use planning — are unnecessary. On the contrary, these and other measures are essential, but until Canada gets road pricing right, those measures by themselves cannot achieve the government's sustainable transportation goals.

More details about these proposals appear in the discussion of roads, passenger travel and urban transport in Chapters 10, 11 and 12. Some of the measures might require legislation. At the same time, the Panel sees a need to reinforce the federal government's commitment to the national objective of sustainable development with an explicit commitment to sustainability in transportation.

> **Recommendation 17.1**
> **The Panel recommends that the statement of objectives of national transportation policy in the *Canada Transportation Act* recognize the environmental goals of national policy.**

Notes

[1] World Commission on the Environment and Development, *Our Common Future*, Oxford University Press, 1987.

[2] National Climate Change Strategy Development, Transportation Table, *Transportation and Climate Change: Options for Action*, Transport Canada, November 1999.

[3] The Table estimated only the independent effects of the measures, which summed to about a 16% reduction in 2010 emissions, but several of the measures would address the same source of emissions, and their combined effects would be lower.

[4] See National Climate Change Strategy, Tradable Permits Working Group, *Using Tradable Emission Permits to Help Achieve Domestic Greenhouse Gas Objectives*, Ottawa, April 2000.

[5] Transport Canada, *Sustainable Development Strategy 2001–2003*, Ottawa, 2001.

[6] Transport Canada, *Sustainable Development Strategy*.

[7] TEA-21 provides some minor funding to state and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act, but more important, the government can withhold funding under TEA-21, for roads or other transport investment, from jurisdictions that fail to meet the air quality standards of the Clean Air Act.

Chapter 18

Public Policy Development

The Panel sees policy development as a continuous process of monitoring developments, analyzing the actions of suppliers and users, synthesizing the views of interested parties, and designing or modifying policy instruments. Public policy cohesion and co-ordination depend on these processes and should be underpinned by broad underlying principles. All of this occurs to a large extent within the Minister of Transport's portfolio. The Panel believes two key supporting ingredients, data and research, need improvement given the fundamental role they can play in the development of sound public policies.

Transportation Data

Panel members reviewed written and oral submissions, read commissioned research reports, and heard advice from experts at round tables and workshops. We were struck by repeated references to the paucity of publicly available information on transportation activities. This no doubt reflects in part the magnitude and complexity of transportation issues, but it is also evident that better information could be made available, and indeed is available in most developed economies.

Participants in the Panel's consultations had concerns about data collection and dissemination in all modes of transportation, in particular the lack of data needed for analyses, long time lags in obtaining data, and inconsistencies among local, provincial and national data sets.

There will always be a need for comprehensive transportation data to help define a vision for the transportation system and make the right strategic decisions to meet current and future needs. A complete picture of the transportation system and its consequences requires accurate and reliable data on

- flows of people, goods, and vehicles;
- the facilities and services that support these flows; and
- the economic, safety, energy, and environmental consequences of transportation.

Institutional and Operating Environment

Recent institutional and operational changes have affected data requirements, collection and dissemination. With divestiture, privatization or commercialization of key system elements, companies such as Air Canada and CN and new entities such as NAV Canada and the airport, port and St. Lawrence Seaway authorities have had to adjust to new data demands and processes. For some transportation suppliers and users, access to data has become more difficult.

Other developments that challenge information systems include increased integration of North American surface transportation, code-sharing agreements between air carriers, international air carriers alliances, the introduction of e-business, and modal shifts such as greater use of air cargo and small parcel/courier services.

Regulatory/Legislative Framework

The *Statistics Act* and the *Canada Transportation Act* are the two principal laws governing collection and dissemination of transportation data. Section 50 of the *Canada Transportation Act* allows Transport Canada to regulate data collection from carriers and transportation or grain handling undertakings under federal jurisdiction, while section 51 governs dissemination of this information. By law, this information

- is confidential and cannot be released without permission from the data provider;
- can be used within the federal government for purposes of administering any act of Parliament;
- can be released publicly in aggregate form; and
- must be protected through appropriate confidentiality measures.

There are financial penalties for failing to supply information as specified in the law.

Data Gaps

Many of the complaints the Panel heard were about the lack of aviation data. In the current situation, with market dominance a national issue, many interested parties are anxious to monitor aviation competition. A number of dimensions of carrier performance could be analyzed, but the most basic requirement would be to examine carrier shares and average fare information by city-pair markets. Such information cannot be released, however, precisely because Air Canada now dominates most of the domestic city-pair routes, and federal statistics policies generally prohibit the release of commercial data that would identify individual companies.

Participants in the Panel's consultations argued that the need to know should supersede confidentiality in the airline industry; lack of data in the public domain prevents an assessment of whether competition is working. Some observers even suggested that the absence of data might constitute an additional barrier to entry by competitors. Others noted that information on Canadian carriers is available from international agencies such as the International Civil Aviation Organization but not from Canadian government agencies or the carriers themselves. They also drew attention to the significantly greater amount of aviation data routinely available in the United States.

The Panel also encountered information gaps related to constrained access, insufficient timeliness, and incomplete system-wide data. Most of the complaints about air data result from access problems. Air carrier data made available routinely in the U.S. but not in Canada include the following:

- flights, passengers and yields by origin/destination;
- carrier costs and fare type by route; and
- quality of service measures, such as delays in departure and arrival by airline and airport, mishandled baggage and customer complaints.

Other largely inaccessible data include detailed Transport Canada rail traffic information, which can be shared with provinces only with the railways' authorization. Road information gathered at a provincial or local level is accessible by a federal department only with the agreement of the provincial or local government.

A lack of timely information was an issue in assessing the financial situation of Canadian Airlines International. An example of incomplete data is information on short line railways, because the *Canada Transportation Act* applies only to federal carriers and undertakings. Another deficiency in rail data occurs for Canada-U.S. traffic, where distance is reported only for the domestic leg of a transborder movement.

Thus, the deficiencies are by no means confined to aviation data. Traffic information is not available on a comparable basis for all freight modes — especially because of the lack of tonne-kilometre data for trucks — or for all passenger modes, because passenger-kilometre information is not available for urban transit or intercity bus operations. Such data are clearly essential to an integrated multi-modal approach to planning and policy assessment. Solutions are in the interests of carriers concerned as much as governments and should not be beyond their combined ingenuity.

The Panel also encountered serious information deficiencies in trying to understand the extent of user pay and government support for transport. Identifying the nature of government-provided services and their costs would seem indispensable to efficient management and essential information for competitors and taxpayers alike. Yet information on the largest of all government transport operations, revenues and expenditures — roads and highways — is sufficiently obscure that major arguments continue to rage about whether they involve subsidies at all and whether they differ by type of road and vehicle. Some of the solutions require research, rather than just data, but collection and presentation of consistent data on traffic across jurisdictions would permit greater understanding of and insight into policy options.

Details about some government-provided carrier services are also lacking. VIA Rail keeps confidential all information on its individual services, preventing any monitoring of trends or comparisons among services by the public, researchers, or potential competitors. No public purpose is served by such confidentiality. The public interest in achieving greater cost-efficiency would be better served by making available as much information as possible, to permit public scrutiny and allow potential competitors to assess the market. Similarly, some information on urban transit traffic, costs and revenues — compiled by the Canadian Urban Transit Association — is not available to the public; it is provided only to member transit agencies. As all these agencies are taxpayer-funded, the Panel suggests they should agree to release the information as a service to the public.

Information gaps often become apparent as institutional and operating environments change. The Panel recognizes that adjusting data collection systems often takes time. Current data collection is out of step, however, with many of the major shifts in the Canadian and global economies. For example, e-business may have changed flows of goods and the relative mix of modal activities, but the absence of data prevents measurement of these changes. The growing small parcel/courier industry remains relatively unexplored from a data perspective, and traffic flow measures do not exist on the use of air cargo services.

Some of the restrictions on the ability to collect data are imposed by the *Canada Transportation Act* itself. The Act restricts Transport Canada from gathering information where to do so would require or have the effect of requiring a person to provide the Minister with a confidential contract made under the Act or the *Canada Marine Act*. This provision could hinder Transport Canada's ability to monitor rail rate levels, terms and conditions of service, and fees charged by Canada Port Authorities.

Costs

The Panel recognizes that data providers want to minimize the cost of reporting. Some shippers responding to our survey expressed concern about the burden of reporting to governments. At the same time, their participation reflected an understanding of the benefits to all system participants of good information.

Potential cost savings are available through applying new information technologies to data collection and dissemination. To date, however, apart from the use of computer-assisted telephone surveys (which have brought no real cost savings) and the use of intelligent transportation systems for toll collection (Ontario's Highway 407), there has been no significant breakthrough in using technology to collect public sector transportation data. Despite significant penetration of information technologies in the business-to-business environment, the transfer of data to government has yet to enter the information technology era.

Co-operation between governments in data collection can also yield savings. This applies to the integration of North American statistical approaches as well as between governments within Canada.

Considerations and Recommendations

Access to Airline Data

Confidentiality provisions and increased market dominance by Air Canada have made access to air carrier market data more difficult. This information is needed by airports for planning and marketing, by carriers interested in offering new services, by tourist operators exploring new market opportunities, by provinces and municipalities concerned about services to their communities, and by analysts examining industry competition.

The Panel supports the view that as the trend toward increased concentration continues across modes, confidentiality provisions attached to the release of information are out of step with the need to know.

The first interim report of the Independent Transition Observer on Airline Restructuring emphasized the need for more comprehensive public data, especially on prices and traffic levels.[1] In releasing the report, the Minister of Transport announced that a conference would be held in Ottawa to discuss collection, distribution and analysis of air statistics. That conference will have taken place by the time this report is released. The Panel offers an assessment to aid the Minister's consideration of possible courses of action.

The Panel considered two options: moving to a U.S.-style system, or making selected additional data series available. Most airline data collected in the U.S., with a few exceptions, are made readily available to the public. Public access to international data of U.S. and foreign air carriers is restricted for a period of six months, and U.S. carriers' foreign-to-foreign airport data are restricted for three years.

If access to data in Canada were similar to access in the U.S., analysts would be in a better position to examine public interest issues. For example, with a U.S.-style data regime, it would be possible to examine changes in market shares and yields since Air Canada took over Canadian Airlines. Making all data available would involve additional costs in carrier provision and government processing. Such costs have to be weighed against the benefits. As well, some cost recovery might be possible. This approach would require an amendment to the Act.

The second option would be to place additional data in the public domain. A series of tables for individual airports could be published showing annual passengers and seats broken out by market sector (e.g., domestic, transborder and international) and carrier type (major airlines, regional airlines, local service airlines). To monitor fares, data could be published on average fare or passenger yield for each passenger enplaning or deplaning at the site, again broken down by market sector and carrier type. Such information would not be sufficient for full route analysis, and the gap in information on air carrier service quality would continue. This approach would also involve amending the Act.

The Panel recognizes the confidentiality concerns but believes competition and efficiency are hampered by restrictive data access. Solutions should be sought in collaboration with air carriers that meet policy needs with the minimum additional burden or commercial harm.

> **Recommendation 18.1**
> **The Panel recommends that the Minister of Transport take the necessary steps to make available for Canadian operations, carriers and airports information similar to that routinely available in the United States.**

New Data and Methods

The Panel recognizes the paucity of transportation data and the misfit between data collected and changes in the domestic and global economies. At the same time, responding to government data requests can be costly, although new technologies offer opportunities to mitigate those costs. Effective and economical solutions should be developed in collaboration with the relevant industry participants.

> **Recommendation 18.2**
> **The Panel recommends that the government and transportation industries expand the collection of transportation data and develop new procedures to reflect changes occurring in the domestic and global economies.**

Data Sharing by Government Departments

The *Canada Transportation Act* limits the purposes for which information can be collected and how it can be used. This restricts availability and access where officials from different departments work on horizontal policy initiatives, such as sustainable development. The Panel considers it crucial that federal government departments have shared and timely access to appropriate information on all modes, particularly for examining horizontal issues.

> **Recommendation 18.3**
> **The Panel recommends that the *Canada Transportation Act* be amended to ensure that transportation data can be shared across federal departments.**

Data on Subsidized Services

The Panel believes information on the nature and costs of publicly provided services should be public, to allow users to understand the costs they are imposing, the public and researchers to understand and monitor the payments and advise on policy options, and competitors to judge market potential.

Recommendation 18.4
The Panel recommends that the Minister of Transport ensure that detailed information on the extent and cost of federally supported transport infrastructure or carrier services be made available and encourages similar actions by other levels of government.

Non-Compliance

The Panel recognizes that existing penalties have not deterred some cases of non-compliance in data reporting. A deregulated environment may have encouraged non-compliance, as firms face cost pressures. Non-compliance occurs when false or misleading information is provided, no information is reported at all, or information is reported late. The Act provides for administrative penalties with fixed limits that are unlikely to be a deterrent to non-compliance. The Panel believes that effective incentives to report information in a timely way should be available to convey the seriousness of the reporting requirement. Penalties should be considered that are appropriate to the size of the carrier or undertaking and to the delay in reporting.

Recommendation 18.5
The Panel recommends that penalties be introduced that will provide effective incentives to comply with data reporting requirements.

Restricted Information

Restrictions in the Act that hinder Transport Canada's ability to monitor rail rates levels, terms and conditions of service, and fees charged by Canada Port Authorities should be removed. Transport Canada needs full access to this information in order to assess the state of rail competition and to monitor Canada Port Authorities. The Panel notes that this restriction was partially lifted last year to allow Transport Canada to monitor the grain transportation and handling system.

Recommendation 18.6
The Panel recommends that the restriction on monitoring in subsection 50(3) of the *Canada Transportation Act* be repealed.

Transportation Research

The contribution of academic and independent specialists was critical in helping the Panel reach an understanding of complex issues. The Panel commissioned or conducted research into issues raised by the terms of reference or identified through consultations. The results were of great assistance to the Panel.

Given the scope and complexity of current and emerging transport issues, they will require the continued scrutiny of expert researchers. There is particular urgency in the face of rapid change in institutional and operational environments. Trends referred to throughout this report — such as concentration in transport industries, integrated North American transport systems, and new technologies — have yet to play out completely, and others will emerge. New dimensions or aspects of the policy concerns the Panel has addressed, including competition, financial viability and sustainable development, will provide challenges. Ultimately, good policy decisions will depend in part on the understanding that research can provide.

Concerns were expressed during the Panel's consultations about a potential shortage of transport researchers and, more generally, a shortage of qualified personnel for governments and the transportation sector. The Panel recognizes the difficulties facing educational institutions. As governments and the transport sector restructured, research funding was reduced, with job opportunities and the demand for transport training declining in consequence. At the same time, without reliably funded research centres, it is difficult to retain interested students and faculty who would be available to respond to research requests.

Transport Canada terminated its program of targeted university research funding in 1986. Since then, university transportation centres have found other sources of funding, but many are fragile. Further, a recent survey found very few comprehensive university transportation programs.[2] The importance of education and research through transportation centres has been recognized in the U.S. The *Transportation Equity Act for the 21st Century* authorized US$158.8 million in transportation research funds, plus an additional US$36 million in transit funds, over fiscal years 1998–2003 for grants to establish and operate 10 regional university transportation centres and up to 23 other centres.

The Panel believes that action is essential to sustain and build on current efforts at Canadian universities to develop the professional schools of transportation that will generate needed academic expertise and research capabilities. Investment in the knowledge base is critical.

The Panel does not want to prejudge the best means of investing or advocate proliferation of research funding programs. The government already contributes to the cost of academic institutions through general transfers to provinces and territories, scholarship programs, direct research funding by its research councils, and issue-specific research contracts. In addition, the following possibilities could be considered for complementary actions:

- funding of a transport research network, including payments to institutions providing recognized courses in transport policy, for the administrative expenses of retaining and developing exchanges of research information; and
- funding of scholarships for training in transport, including policy analysis, possibly at post-graduate level, possibly with a commitment to co-op assignments or internships with Transport Canada.

The Panel also believes that a strong research capacity within government is necessary to support policy development and suggests that Transport Canada consider supporting existing research functions by

- greater transparency, notably through web site publication of research reports produced in-house and under contract; and
- periodic appointment of an eminent researcher to a visiting chair in transportation research at Transport Canada.

Funding for such initiatives would likely be minuscule in relation to the amount of annual spending on transportation. The Panel suggests nevertheless that the government give it some predictability and make a firmer commitment to transport research by allocating to it a small proportion of annual external spending on transport infrastructure and operations.

Recommendation 18.7
The Panel recommends that the government increase its support for transportation research.

Policy and Legislative Cohesion

Section 53 of the *Canada Transportation Act*, the section that provides the Panel's mandate, requires the Panel to pay heed to any act of Parliament for which the Minister of Transport is responsible and that could be viewed in whole or in part as touching on the economic regulation of a mode of transportation and transportation activities under the legislative authority of Parliament.

The traditional view sees laws governing pricing, market structure, and service levels for transportation service and infrastructure providers as 'economic regulation'. In its broadest sense the term could connote any piece of legislation that imposes requirements on transportation, since these requirements have costs associated with their application. For example most safety and environmental regulation requirements could be considered economic regulation. Many of the laws for which the Minister of Transport is responsible are narrow in scope, but a significant number have broad application in the Canadian economy. The Panel also notes that some important transport-related economic legislation is not the responsibility of the Minister of Transport, such as the provisions regarding fees for marine navigation services (which are the responsibility of the Minister of Fisheries and Oceans). A list of these laws is set out in Appendix 2.

Whether we take the broad or the narrow view of economic regulation, it is clear that the matrix of transportation legislation has led to conflicting approaches to regulation. The different acts have proceeded through Parliament at different times, driven by policy arguments particular to the concerns and issues of the day. For example, there are important differences between the statement of national transportation policy that appears in the *Canada Transportation Act* and the statement of policy in the *Canada Marine Act*.

Another problem arises because many of the later pieces of legislation contain provisions calling for periodic review. There seems to be little co-ordination in the timing of these reviews. The Panel believes that it will be difficult to achieve a common vision of transportation policy while policy in individual sectors is treated separately from the rest of transportation policy.

The Panel is concerned that the ensuing array of legislation could result in conflicting policy directions. It is very much in Canada's economic interest to ensure appropriate policy co-ordination.

> **Recommendation 18.8**
> **The Panel recommends that transport policy and legislation be guided by underlying principles, such as those identified in this report, that are common to all transportation modes.**

Notes

[1] Debra Ward, Independent Transition Observer on Airline Restructuring, *The Impact of Airline Restructuring in Canada*, February 5, 2001.

[2] Research and Traffic Group, "Inventory of Professional Training in Transportation", prepared for Transport Canada, March 2000, p. 36.

Chapter 19
Other Legislative Changes

Throughout this report the Panel suggests amendments to the legislative and policy framework. Most proposed changes are discussed in the relevant chapter. In the course of the Panel's review, however, several other possible modifications emerged that have not been dealt with elsewhere. The Panel's assessment and suggestions for change (where warranted) appear in this chapter.

Agency Power to Compel Observance of Obligations (section 26)

A recent Federal Court of Appeal decision held that the Act contains no provision conferring on the Canadian Transportation Agency the power, duty or function of administering the whole Act and that the Agency is mandated specifically to administer only parts of the statute. In instances where the Act imposes an obligation or prohibition without naming the Agency as a body to which complaint can be made in the event of breach, the Court's decision means that the Agency has no jurisdiction to deal with the matter; complainants would presumably have to seek a remedy in the court system. Such is the case in section 118, which imposes an obligation on a railway to quote a tariff but provides no guidance about the procedure to be followed in the case of a breach. The Court's decision on this point suggests a change from what had been the accepted position.

The Panel believes that parties should not be forced to take court action in every circumstance involving non-compliance with the Act.

> **Recommendation 19.1**
> **The Panel recommends that provisions of *Canada Transportation Act* imposing an obligation or prohibiting specified actions without mandating the Canadian Transportation Agency to administer them be reviewed and, if necessary, amended to provide that the Agency can enforce them on complaint.**

Statutory Time Limit
(section 29)

The Act provides that the Agency shall make its decisions as expeditiously as possible, but no later than 120 days after the originating documents are received, unless the parties agree to an extension. The Agency has found that this time limit can be too short in circumstances where there are procedural and jurisdictional challenges, incomplete applications, legal issues that need to be resolved before the application can proceed, or individual complaints that raise systemic issues that are broad in scope. In these circumstances it can be nearly impossible to deal with a matter within the 120-day time limit, and the Agency must seek the parties' consent to continue to deal with the matter.

While the principle underlying the statutory deadline — promoting quick decisions — is valid, the Panel does not believe that parties should be able to prevent the Agency from dealing with a complaint by withholding their consent to an extension.

> **Recommendation 19.2**
> **The Panel recommends that section 29 of the *Canada Transportation Act* be amended to give the Canadian Transportation Agency the power to extend the 120-day time limit on its own motion where not doing so would cause serious prejudice to a party. The Agency should be required to report the circumstances where it exceeds its statutory time limit in its annual report.**

Mediation

The Agency has been pursuing a pilot program of mediation and dispute resolution as an alternative to formal regulation. Panel members believe that mediation can enhance regulatory efficiency and that the Agency should be given flexibility to choose the most effective means to settle disputes that come before it. The *National Transportation Act, 1987* provided a legislative framework for mediation, but the Act no longer has such provisions.

The Panel supports the use of alternative dispute resolution processes with respect to matters under the Agency's purview. This is consistent with the Panel's goal of achieving negotiated solutions rather than regulatory outcomes whenever possible. To the extent that the current pilot program is successful and the Agency wishes to continue mediation, the Panel believes that a legislative basis should be provided, giving the Agency the power to establish rules for mediation.

Recommendation 19.3
The Panel recommends that the Canadian Transportation Agency be given the statutory authority to engage in mediation and to establish rules setting out when mediation may be required before complaints or applications enter a formal decision process.

Review of the Act
(section 53)

The Panel has had occasion to reflect on the review mandate set out in section 53. The objective of the review, as specified in the Act, is to assess whether the legislation "provides Canadians with an efficient, effective, flexible and affordable transportation system". The national transportation policy, on the other hand, refers to a safe, economic, efficient and adequate network of viable and effective transportation services, accessible to persons with disabilities, and that makes the best use of all available modes of transportation at the lowest total cost.

Recommendation 19.4
The Panel recommends that section 53 of the *Canada Transportation Act* be brought into line with the national transportation policy, as amended by the Panel's proposals.

The Act gives a review panel the powers of commissioners under Part I of the *Inquiries Act*. A recent court decision that interpreted language similar to that used in the *Inquiries Act* cast doubt on the circumstances under which the production of documents can be compelled. It was not necessary for this Panel to use such powers, but the Minister may wish to consider resolving this problem before another review panel is appointed.

Recommendation 19.5
The Panel recommends that the Minister of Transport consider whether legislative amendments are needed to give a review panel the power to compel the production of documents.

Railway Line Construction
(section 98)

Section 98, which requires Agency approval of railway line construction, applies not only to mainlines and branch lines but also to sidings, spurs, yard tracks and other auxiliary trackage. Agency approval under the *Canada Transportation Act* triggers an environmental assessment of the proposed construction under the *Canadian Environmental Assessment Act*. The section specifies, however, that Agency approval is not required for new railway lines or other facilities if they are built within the right of way of an existing railway line or within 100 metres of the centre line of an existing railway line for a distance of no more than 3 kilometres.

The Agency has pointed out that facilities such as intermodal yards and trans-shipment centres, which could be built within these limits, would be exempt from Agency approval. They would therefore not trigger the environmental assessment, even if they were major facilities with significant potential environmental consequences. This may be an unintended consequence of the Act's exemption limits.

> **Recommendation 19.6**
> **The Panel recommends that the Minister of Transport consider whether the existing exemption in section 98 of the *Canada Transportation Act* is appropriate.**

Railway Police
(section 158)

This section allows railway companies to have their own police forces. Providing police powers in an act of Parliament directed at the economic regulation of transport appears problematic to the Panel. Policy officials responsible for the Act presumably have little or no expertise in this area, and when problems arise must seek expertise elsewhere. It seems to the Panel that it would be much more sensible for another branch of government, with knowledge of the issues involved, to handle questions such as the need for special railway police forces and the need for independent review of railway police action if there are to be such forces.

Recommendation 19.7
The Panel recommends that the provisions of the *Canada Transportation Act* allowing railways to appoint police constables be repealed and that responsibility for policy questions on railway police issues be transferred to the appropriate government department.

Chapter 20
Toward a Vision for National Transportation Policy

During its consultations the Panel heard repeated calls for a new and forceful vision for national transportation policy. For most, vision calls for stronger leadership by the federal government, to bring greater co-ordination, harmonization and integration of the various transportation modes.

It is certainly possible to articulate a vision for national transportation policy, but it cannot be realized by federal policies alone. Federal legislation and policy apply only to the portions of the transportation system under federal jurisdiction. Much of the transportation system, indeed the majority, is road-based transportation under provincial and municipal responsibility. If their policy directions and legislation are not consistent with a national vision, it will be difficult to achieve an efficient and harmonized system. There is every reason to expect at least some conflict.

Provincial and local governments focus, appropriately, mainly on issues of immediate concern to their residents and region. It is nevertheless evident to the Panel that there is wide recognition across Canada of the need for a national perspective and institutional structures to encourage Canadians to participate in a broader vision. The federal government does have powers of taxation and spending to encourage compliance with a national vision. It has the mandate and authority to deal internationally and to exert leadership on issues of common interest across provinces.

In April 2001 the Minister announced a process to formulate a new vision or blueprint for transportation. This chapter is intended to contribute to that process by examining the declaration of national transportation policy in section 5 of the *Canada Transportation Act*. The chapter begins with a brief synthesis of the many suggestions the Panel heard about the broad directions for transport policy. The second part examines and comments on section 5 of the Act. In the final part, the Panel offers some suggestions for a statement of national transportation policy.

What the Panel Heard

There is wide agreement on the need for a vision statement for national transportation policy. Participants in the Panel's consultations had varying interpretations of what this means, but there was close to universal support for creating such a statement.[1]

The Panel was told that the statement of national transportation policy should recognize the significance of transportation generally and infrastructure in particular in economic well-being. An efficient and effective transportation system is vital to the economic development of the regions and the whole country. Transportation is the backbone of domestic and international trade. It is vital for the production and trade of resource-based products, and it is vital to the functioning of urban regions, where much of the wealth is produced in a new economy.

Review participants appear united in the belief that the transportation system should be guided by users and market forces, not government directives. There is also broad recognition, however, of the need for some public support of infrastructure or accessibility for rural and remote communities (which is not exclusively a federal responsibility).

The consensus is that market competition within and among transport modes should be the organizing mechanism for transportation, as far as possible. Where competition is lacking, there is a need for regulation or pro-competitive policies to compensate for the lack of market competition.

A common call was for increased federal spending on transportation infrastructure, similar to the government spending emphasis in the U.S. national transportation vision. The Panel agrees that infrastructure is crucial to economic performance, but in the Panel's view, infrastructure calls for the right investment in the right place at the right time. Infrastructure investments need to be targeted to where they are most needed and useful. The Panel sees the institutional reforms being adopted in Canada — moving toward greater emphasis on user funding and control over infrastructure — as the right approach, and the Panel has recommended further efforts in this direction. The U.S. has much greater wealth to draw on for infrastructure investments. Canada has to invest smarter, and the Panel believes Canada is on the right track in this regard.

There were also wide calls for federal leadership to help harmonize regulations and policies across provinces and territories and with the United States where possible. Provinces have constitutional jurisdiction that they wish to protect, and there is often a need to allow some variation in policies across regions. Nonetheless, the Panel heard many voices — including those of provincial and territorial governments — calling on the federal government to exercise leadership in reconciling differences and promoting harmonization and hence greater efficiency in all modes across the country.

There is also consensus that government policies should seek consistency of treatment among the modes and therefore that policies on taxation, regulation or public investment should not distort the efficient allocation of traffic and resources across the modes.

The foregoing guidelines contribute to another requirement mentioned by many participants in the Panel's process — the importance of fostering a seamless transportation system, one that facilitates interchange and integration of modal services and all the components involved in modern supply chains.

The Panel also heard strong concern for the environmental impact of transportation and that sustainable development should be a part of a national transportation vision.

A further concern not always mentioned by interveners, but one the Panel believes has broad support, is that the transportation system be accessible to persons with disabilities.

The Current Policy Statement

In presentations to the Panel, party after party referred to section 5 of the *Canada Transportation Act* — the statement of national transportation policy (see box).

Parties asked the Panel to recommend amendments to the national transportation policy. A comparison of the policy statement since its inception in the *National Transportation Act* of 1967 shows that it has grown in length and complexity. The *National Transportation Act, 1987* and *Canada Transportation Act* of 1996 added new conditions to be "ensured" and further qualifications to the existing provisions. As a result, the statement now enumerates so many objectives, and lists so many qualifications, that even parties with diametrically opposed positions can find support for their respective points of view. The current version has been criticized by those familiar with its history for its complexity and obscurity, for superfluous

Canada Transportation Act of 1996 — National Transportation Policy

5. It is hereby declared that a safe, economic, efficient and adequate network of viable and effective transportation services accessible to persons with disabilities and that makes the best use of all available modes of transportation at the lowest total cost is essential to serve the transportation needs of shippers and travellers, including persons with disabilities, and to maintain the economic well-being and growth of Canada and its regions and that those objectives are most likely to be achieved when all carriers are able to compete, both within and among the various modes of transportation, under conditions ensuring that, having due regard to national policy, to the advantages of harmonized federal and provincial regulatory approaches and to legal and constitutional requirements,

(a) the national transportation system meets the highest practicable safety standards,

(b) competition and market forces are, whenever possible, the prime agents in providing viable and effective transportation services,

(c) economic regulation of carriers and modes of transportation occurs only in respect of those services and regions where regulation is necessary to serve the transportation needs of shippers and travellers and that such regulation will not unfairly limit the ability of any carrier or mode of transportation to compete freely with any other carrier or mode of transportation,

(d) transportation is recognized as a key to regional economic development and that commercial viability of transportation links is balanced with regional economic development objectives so that the potential economic strengths of each region may be realized,

(e) each carrier or mode of transportation, as far as is practicable, bears a fair proportion of the real costs of the resources, facilities and services provided to that carrier or mode of transportation at public expense,

(f) each carrier or mode of transportation, as far as is practicable, receives fair and reasonable compensation for the resources, facilities and services that it is required to provide as an imposed public duty,

(g) each carrier or mode of transportation, as far as is practicable, carries traffic to or from any point in Canada under fares, rates and conditions that do not constitute

(i) an unfair disadvantage in respect of any such traffic beyond the disadvantage inherent in the location or volume of the traffic, the scale of operation connected with the traffic or the type of traffic or service involved,

(ii) an undue obstacle to the mobility of persons, including persons with disabilities,

(iii) an undue obstacle to the interchange of commodities between points in Canada, or

(iv) an unreasonable discouragement to the development of primary or secondary industries, to export trade in or from any region of Canada or to the movement of commodities through Canadian ports, and

(h) each mode of transportation is economically viable.

and this Act is enacted in accordance with and for the attainment of those objectives to the extent that they fall within the purview of subject-matters under the legislative authority of Parliament relating to transportation.

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***National Transportation Act* of 1967 — National Transportation Policy**

It is hereby declared that an economic, efficient and adequate transportation system making the best use of all available modes of transportation at the lowest total cost is essential to protect the interests of the users of transportation and to maintain the economic well-being and growth of Canada, and that these objectives are most likely to be achieved when all modes of transport are able to compete under conditions ensuring that having due regard to national policy and to legal and constitutional requirements

(a) regulation of all modes of transport will not be of such a nature as to restrict the ability of any mode of transport to compete freely with any other modes of transport;

(b) each mode of transport, so far as practicable, bears a fair proportion of the real costs of the resources, facilities and services provided that mode of transport at public expense;

(c) each mode of transport, so far as practicable, receives compensation for the resources, facilities and services that it is required to provide as an imposed public duty; and

(d) each mode of transport, so far as practicable, carries traffic to or from any point in Canada under tolls and conditions that do not constitute

  (i) an unfair disadvantage in respect of any such traffic beyond that disadvantage inherent in the location or volume of the traffic, the scale of operation connected therewith or the type of traffic or service involved, or

  (ii) an undue obstacle to the interchange of commodities between points in Canada or unreasonable discouragement to the development of primary or secondary industries or to export trade in or from any region of Canada or to the movement of commodities through Canadian ports;

and this Act is enacted in accordance with and for the attainment of so much of these objectives as fall within the purview of subject-matters under the jurisdiction of Parliament relating to transportation.

qualification, and for apparent conflicts. One particularly thorough dissection for the Panel advised that "it is flabby, indecisive, confused and lacks vision."[2]

In drafting the policy statement, legislators appear to have tried to satisfy all interested parties at once. Yet policy must involve choices. A legislated national transportation policy statement is too important to become simply a means of recognizing all the various interests.

Evolution of the Policy Statement

As discussed in Chapter 3, the MacPherson Royal Commission on Transportation distinguished between national policy and national transportation policy. The MacPherson commission recommended that

> the objective of a National Transportation Policy shall be to ensure that the movement of Canadian goods and people is effected in a manner which utilizes fewest economic and human resources. This is merely to say that, given the preferences of those people who wish to move themselves or their goods, the movement shall be accomplished as efficiently as possible.

This recommendation was adopted in the *National Transportation Act* of 1967:

> It is hereby declared that an economic, efficient and adequate transportation system making the best use of all available modes of transportation at the lowest total cost is essential to protect the interests of the users of transportation and to maintain the economic well-being and growth of Canada…

The statement goes on to elaborate on implications of this objective, which can be paraphrased in part:

(a) Any regulation should be neutral and not distort choices between modes;

(b) Modes (and individual carriers by implication) bear "…a fair proportion of the real costs of resources, facilities and services provided that mode …at public expense";

(c) Each mode (and carrier) receives compensation for any imposed public duties;

(d) Prices and services do not impose any "unfair disadvantage… beyond that disadvantage inherent in the location or volume of the traffic, the scale of operation…"

All these principles — though with some re-wording — persist in section 5 of *Canada Transportation Act* of 1996.

The MacPherson commission was explicit that the way to achieve an efficient system was to rely on market competition as far as possible:

> Public action…in developing a National Transportation Policy must seek to encourage competitive forces where the structure of industry permits pervasive and effective competition to operate, and to regulate where it does not.

The emphasis on market competition was not stated explicitly in the 1967 act, but the phrase was added in 1987 and retained in 1996:

> ...competition and market forces are, whenever possible, the prime agents in providing viable and effective transportation services…

Over the years, modifications to the transportation acts in 1987 and 1996 brought a number of additional considerations into the statement of national transportation policy, and several more were suggested to the Panel. The *National Transportation Act, 1987* added safety as a goal, although qualified as the "highest *practicable* safety standards".

The 1987 act also introduced the principle of accessibility to people with disabilities, specifically that "fares, rates and conditions…do not constitute… an undue obstacle to the mobility of persons," including persons with disabilities. It also added regional development goals to the list of qualifiers on the pursuit of an economically efficient transportation system.

Submissions to the Panel suggested other phrases that could be added to the central objectives of a national transportation policy, including equity, intermodal integration, accountability, and environmental sustainability. Energy efficiency would probably be added as well if a review of the Act took place during times of energy shortages and/or high energy prices.

Anyone reviewing transportation policy will be tempted to include all manner of desirable attributes to be sought from transportation. But the more adjectives and qualifiers are inserted in a policy statement, the more elusive and less focused the policy becomes. This is not to deny that there can and should be as many interests and pressures as there are individuals and interest groups in society, but it is vitally important to not lose sight of shared fundamental goals.

The Panel endorses what has been the principal underlying objective of national transportation policy for more than three decades: Canada is best served by an economically efficient transportation system. There are subsidiary goals that society is likely to pursue, but they should not obscure the fundamental objective.

Where policies are pursued that conflict with the efficiency of the system and impose costs on carriers and users, such policies must be applied in a cost-effective manner, preferably in ways that do not distort the efficient choice of modes. If there are substantial costs of achieving certain non-economic goals, the question that arises is whether to levy those costs on transportation carriers and users, or whether it is more appropriate for general taxpayers to pay for them as 'imposed public duties'. There is no simple or general answer to these questions.

The next section sets out a number of principles the Panel believes should be incorporated in a revised statement on national transportation policy. They are not expressed in the legal language needed for a new act; the emphasis is on the concepts rather than specific language.

Toward a New Statement of National Transportation Policy

The following general guide outlines the features of a desirable national transportation policy. It is a statement of general principles or intentions; it will not be possible for policy always to conform to these principles, but they provide the target. The statement is intended to guide 'national' transportation policy, but overlapping jurisdiction means that each level of government has policy instruments to carry out (or thwart) national policy goals. This issue is not addressed in these policy guidelines.

1. Economic well-being and growth are best served by an economic and efficient transportation system, making the best use of all modes at lowest total cost.
2. Competition and market forces are to guide the transportation system.
3. Where competition is lacking, regulation may be needed to limit the exercise of market power. Such regulations should be neutral, not favouring one carrier or mode over another.
4. Transportation users and providers pay for the real costs of resources, facilities and services provided to them at public expense and, as far as practicable, shared public infrastructure facilities include direct user input in decisions on funding and spending.

> The present statement refers to "a fair proportion" but the guiding principle is a goal of full cost recovery where possible.

The first four principles describe an idealized competitive, market-driven transportation system. But social constraints are imposed on the transportation system. As the Panel recognized at the outset, there is more to transportation than economics. For example, particularly in a vast country with limited population, some parts of the economy will not be able to support a purely commercial transportation system. Public policy will require that the transportation system serve all Canadians, at least to some degree, even if it is uneconomic.

It is desirable that such interventions be done as efficiently and cost-effectively as possible, however. The next set of principles embody the major public policy constraints to be imposed on an otherwise purely commercially-driven transportation system. Note that different levels of government could be involved in imposing and implementing modifications on a purely commercial transportation system.

5. The transportation system conforms to the highest practicable safety standards.

> A commercial system can be expected to be a safe system, but ultimately it is a matter of public interest what the optimal level of safety should be.

6. All Canadians require reasonable access to the transportation system. Where such access cannot be provided on a commercially viable basis, governments should only provide it in such a way as to minimize interference or modifications of the commercial system.

> This is a particularly difficult requirement. It has been implicit in the policy statement and action that Canadians desire a transportation system that is accessible by the vast majority of the population. It is impractical to have jet service, or even paved roads, to every community. But as far as practicable, Canadians expect that some minimum transportation infrastructure and service will be available to nearly everyone. Many of the individual links in infrastructure networks could not be financed solely from charges to their users. Moving toward greater reliance on commercial provision of infrastructure — a policy direction the Panel endorses — reveals subsidies and cross-subsidies previously hidden from view in providing infrastructure and

services where they are not commercially viable. Canadians will still expect those facilities and services to exist. But commercializing infrastructure provision where feasible means that governments must confront directly decisions about the appropriate level of services and how to provide them most efficiently and fairly. This will be an important policy issue at both the federal and the provincial/territorial level.

7. Government interventions to provide non-commercial services occur in the most cost-effective way and, as far as possible, do not favour one mode over another.
8. Providers of transportation services and infrastructure are compensated for any imposed public duties that cause them to incur additional costs in carrying out the imposed public duties.
9. Fares, rates and conditions do not impose undue obstacles to the mobility of persons with disabilities.
10. As far as practicable, the real costs of environmental effects are incorporated into taxes and user fees, and/or taken into account by regulations where that is more efficient and effective than direct charging.

    Including this principle emphasizes that it is not just a matter of mentioning environmental concerns; it is important to incorporate these concerns in a consistent way to guide and facilitate trade-offs between environmental and other concerns.

11. The transportation system and government policy should facilitate the ability of Canadian firms to compete internationally.

    Recognizing the importance of international trade and the need for Canadian transportation firms and industries to compete internationally, a key consideration in the implementation of transport policies — including taxation and user charges — is the need to ensure that these do not put Canadian interests at a competitive disadvantage relative to foreign policies that may distort otherwise efficient transportation markets.

The Panel crafted these guidelines to provide a new focal point for discussion of Canadian transport policy. We present the principles as a basis for drafting a statement of national transportation policy to replace section 5 of the *Canada Transportation Act*. The Panel acknowledges that the actual drafting

will be a task for the Minister of Transport and, ultimately, for Parliament. The Panel agrees that a statement of guiding principles for national transportation policy is important. The Panel's suggestions offer the basis for a statement that can be refined through further consultative and legislative processes in the months to come. Our hope is that by returning to guiding principles, there can be general agreement on what is important. Such agreement will provide the best possible foundation upon which to build a transport system that meets the needs and expectations of Canadians.

Notes

[1] The summary and the original submissions from participants, available on the CD-ROM — including provincial/territorial and municipal governments and industry associations — will be valuable for the Minister's blueprint process.

[2] Trevor Heaver, "The Statement of National Transportation Policy: Assessment and Suggestions for Change", paper prepared for CTAR, March 2001. The Panel also benefited from the advice of John Gratwick, "The Evolution of Canadian Transportation Policy", paper prepared for CTAR, March 2001.

Appendix 1
The Panel's Mandate and Terms of Reference

Terms of Reference

The *Canada Transportation Act* emphasizes the policy objective of fostering a "safe, economic, efficient and adequate" transportation system for Canadian shippers and travellers. Section 53 of the Act calls for a comprehensive review, to be completed by July 1, 2001, of the operation of this Act and any other Act of Parliament for which the Minister of Transport is responsible that pertains to the economic regulation of a mode of transportation and transportation activities under the legislative authority of Parliament.

Section 53 of the *Canada Transportation Act*

53. (1) The Minister shall, no later than four years after the day this Act comes into force, appoint one or more persons to carry out a comprehensive review of the operation of this Act and any other Act of Parliament for which the Minister is responsible that pertains to the economic regulation of a mode of transportation and transportation activities under the legislative authority of Parliament.

(2) The person or persons conducting the review shall assess whether the legislation referred to in subsection (1) provides Canadians with an efficient, effective, flexible and affordable transportation system, and, where necessary or desirable, recommend amendments to

(a) the national transportation policy set out in section 5; and

(b) the legislation referred to in subsection (1).

(3) The review shall be undertaken in consultation with purchasers and suppliers of transportation services and any other persons whom the Minister considers appropriate.

(4) Every person appointed to carry out the review has, for the purposes of the review, the powers of a commissioner under Part I of the *Inquiries Act* and may engage the services of experts, professionals and other staff deemed necessary for making the review at the rates of remuneration that the Treasury Board approves.

(5) The review shall be completed and a report of the review submitted to the Minister within one year after the appointment referred to in subsection (1).

(6) The Minister shall have a copy of the report laid before each House of Parliament on any of the first thirty days on which that House is sitting after the Minister receives it.

The Act's ability to provide the foundation for the kind of transportation system Canadians need stems from the operation of the legislation as well as from the policy objective on which it is based. Both of these elements are considered to be open to review if it is found to be beneficial or required.

Issues Requiring Special Attention

Competitive Rail Access Provisions

The review panel shall consider proposals for enhancing competition in the railway sector, including enhanced running rights, regional railways and other access concepts. These concepts need to be assessed in the broader context of increasing North American integration and ensuring cost effective service for shippers over the long term. The review panel shall submit an interim report on access issues to the Minister of Transport by December 31, 2000.

Other Issues

The following issues shall be considered in connection with any other matters dealt with by the review panel:

(a) the overall effectiveness of the current legislative and regulatory framework in sustaining the high levels of capital expenditures required to enhance productivity and promote innovation

(b) the extent to which the current framework supports the efforts of Canadian transportation players to adapt to the new e-business environment and to meet global logistics requirements

(c) the extent to which the current framework is appropriate for dealing with the public policy issues that may arise from newly emerging industry structures

(d) the extent to which the current framework provides the government with the necessary powers to support sustainable development objectives

(e) the advisability of specific measures designed to preserve urban rail corridors for future mass transit use in the rail line abandonment process

(f) whether the Canadian Transportation Agency should have the powers to set "maximum" as opposed to "actual" interswitching rates (This matter has been raised by the Standing Joint Committee for the Scrutiny of Regulations).

Appendix 2
Legislative Context

Organization of *Canada Transportation Act* of 1996

Introductory Section

National Transportation Policy

Part I Administration

Organization, powers and operation of Canadian Transportation Agency, including:

- power to award costs
- substantial commercial harm test on granting of relief
- time limit for making decisions
- provisions for appeals to the Federal Court of Appeal

Powers to Governor in Council to

- issue policy directions,
- approve Agency regulations
- deal with extraordinary disruptions in the transportation system
- review Agency decisions
- enter into support agreements
- make regulations respecting transportation information

Powers and responsibility of the Minister of Transport to

- direct the Agency to inquire into matters and report
- conduct an annual industry review

Part II Air Transportation

- Definition of 'Canadian' for licensing purposes
- Review of air transport undertaking mergers by Governor in Council
- Licensing of domestic, international scheduled and non-scheduled air services
- Consumer protection measures:
  - prohibition on ticket sales before licensing
  - discontinuation of air service provisions
  - unreasonable rates and terms and conditions reviewable
  - requirement that licensees have insurance and hold operating authority from Transport Canada
  - financial fitness requirements for new licensees
  - Air Travel Complaints Commissioner
- Designation of Agency as Aeronautical Authority for certain purposes

Part III Railway Transportation

Construction and Operation of Railways:

- federal railways eligible for Certificate of Fitness upon proof of insurability
- powers of a railway company holding a Certificate of Fitness
- approval required to construct new railway lines
- regulation of Highway/Railway crossings

Financial Transactions of Railway Companies:

- filing of railway financial instruments for registration purposes
- insolvency reorganization scheme for railways

Rates, Tariffs and Services:

- rates and terms and conditions set by the Agency must be commercially fair and reasonable
- level of service prescribed for railway companies
- rates charged by a railway must be in a tariff or a confidential contract
- railway must quote a rate to a shipper on request
- where more than one railway company involved they must agree on joint rates
- confidential contracts between railways and shippers permitted
- regulated rates for interswitching
- competitive line rates
- rules on limitation of liability by a railway

Running Rights and Joint Track Use

- another railway may apply for running rights
- Governor in Council may require joint track use if more efficient

Transfer and Discontinuance of the Operation of Railway Lines

- provides for notice of impending line discontinuance
- facilitates commercial sale of lines
- permits government to purchase lines where no commercial sale feasible

Transportation of Western Grain

- limits the amount of revenue CN and CP can earn from the transportation of grain

Administrative Provisions

- Agency may prescribe uniform classification of accounts for railways
- rules for railway costing
- Minister of Transport has power to enter into agreements with provinces regarding railway safety, accident investigation and railway crossings on provincial railways

Railway Police

- railways permitted to have police forces

Part IV Final Offer Arbitration

- Allows arbitrator(s) to select between final offer of a shipper and that of the carrier
- Applies to
  - carriage of goods by air
  - carriage of goods by rail with certain expectations
  - northern marine re-supply in some circumstances
  - commuter rail
  - passenger rail provided by a railway company
- Must be completed in 60 days
- Simple, shorter process available for arbitrations under $750,000

Part V Transportation of Persons with Disabilities

- Undue obstacles to the mobility of persons with disabilities in the transportation network can be eliminated by Agency regulation
- Agency can determine, on complaint, whether there is an undue obstacle to the mobility of a person with a disability.

Part VI General

- Enforcement
- Administrative monetary penalties

Part VII Repeals, Transitional Provisions, Consequential and Conditional Amendments and Coming into Force

- Repeal of *National Transportation Act, 1987, Railway Act* for most purposes, *Government Railways Act, Passenger Tickets Act*
- Transitional provisions
- Consequential amendments
- Coming into force

Significant Legislative Changes since the *National Transportation Act, 1987*

Several significant legislative changes marked the shift from the *National Transportation Act, 1987* to the *Canada Transportation Act* of 1996. This was followed by further legislative amendments in 2000.

The Agency and Cabinet

Besides changing the name of the National Transportation Agency to the Canadian Transportation Agency, the Act introduced other more significant changes in the way government exercises regulatory control over transportation, including

- a statutory time limit of 120 days to deal with most matters before the Agency,
- a new requirement for Governor in Council approval of Agency regulations, and
- a new power to the Governor in Council to act in circumstances of extraordinary disruptions in the national transportation system.

The latter provision was exercised in 1999 to suspend competition laws during airline restructuring.

The Agency was also given the power to award costs in cases before it.

Substantial Commercial Harm Test

The substantial commercial harm test introduced in 1996 requires that before the Agency grants a remedy to a shipper, it must be satisfied that without the remedy the shipper would suffer substantial commercial harm. While not limited to railway remedies, the substantial commercial harm test is widely considered to have its most significant impact on rail shippers.

Airline Regulation

The Act changed several provisions dealing with airline regulation. Consumer protection measures were introduced to deal with problems that arise when an under-capitalized air carrier enters the market. The measures responded to a number of start-up failures that left consumers with nowhere to go; they included a prohibition on ticket sales before licensing and a requirement for new carriers to meet a minimal financial fitness test. On the deregulatory front, the more rigorous licensing requirements of NTA 1987 for air carriers operating in the North were eliminated.

New, tougher provisions dealing with market exit, fare levels, and terms and conditions of carriage were added to the Act in 2000 to deal with airline restructuring. Also added was a power to review airline acquisitions and mergers. Finally, the 2000 amendments established the Air Travel Complaints Commissioner at the Agency.

Railways

The most significant change from NTA 1987 was the introduction of railway line sale and discontinuance provisions. These new provisions significantly reduced the regulatory burden on Canadian railways and allowed them to rationalize their networks more easily than had been case under NTA 1987. Other changes included allowing market entry by railways on proof of insurability and the requirement that rates and conditions set by the Agency be fair and reasonable.

The 2000 amendments to the Act stemmed from the review of the grain handling and transportation system by the Honourable Willard Estey and the subsequent work by Mr. Arthur Kroeger as grain handling and transportation facilitator. Most significantly, these changes included repeal of the rate cap on western grain rates and its replacement with a railway grain revenue cap. Other changes were designed to make it easier for community-based interests to acquire grain-dependent branch lines. Among other things, a line must now appear on a railway company's three-year plan for twelve months, instead of just two months, before it can be advertised for sale.

Final Offer Arbitration

The 1996 changes to the final offer arbitration provisions included a reduction in the 90-day period allotted for arbitration to 60 days and an extension of the provisions to northern marine re-supply and commuter and passenger rail operators. The restriction that had precluded FOA on grain rates was eliminated.

Changes in final offer arbitration as part the 2000 reforms dealing with grain handling and transportation included introduction of a simpler process for transactions under $750,000.

Access for Persons with Disabilities

The NTA 1987 provisions applicable to persons with disabilities were limited to transportation modes governed by the Act. In 1996, the Agency's jurisdiction was extended to all transportation undertakings within the legislative authority of Parliament.

Inquiries

The Agency's power to initiate inquiries on its own motion was eliminated.

Public Interest Rate Appeal Provisions

NTA 1987 allowed a complaint to be brought before the Agency that rates and terms and conditions of transportation were against the public interest. These provisions were repealed in 1996.

Elimination of Merger Review Process

The Agency's power to review mergers and acquisitions of transportation undertakings was eliminated in 1996, based on the view that this duplicated the work of the Commissioner of Competition. In the 2000 amendments, the Governor in Council gained a new power to review airline mergers. The duplication issue was resolved by substituting a responsibility to provide advice to the government for the Competition Bureau's review power.

Northern Marine Re-supply Provisions

The Act eliminated provisions in the NTA 1987 regulating northern marine re-supply. However, rates and terms and conditions of service would now be eligible for final offer arbitration.

The major changes since NTA 1987, introduced by the *Canada Transportation Act* and the 2000 amendments to it, are set out in the next table.

Significant Legislative Changes Since the *National Transportation Act, 1987*

Section	Subject and nature of change
1	New name: *Canada Transportation Act*
3	Scope: Application of Act expanded
4	Things done under the Act do not affect the operation of the *Competition Act*
5	National Transportation Policy of NTA 1987 continued with minor amendments
Part I	**Administration**
7-8	National Transportation Agency continued as Canadian Transportation Agency; number of members reduced
18	Residency requirements for members dropped
25.1	Agency granted power to award costs in any proceeding before it
27 (2), (3) & (5)	Limitation on Agency to grant relief only in circumstances where a shipper would suffer substantial commercial harm; provision not applicable to final offer arbitration
28	Power to make *ex parte* orders removed
29	Agency required to make decisions within 120 days
36	Governor in Council approval of Agency regulations required
37	Power to inquire on own motion removed
42	Annual report of Agency required to assess the operation of the Act and report any difficulties in administration observed
47	Governor in Council given power to take steps to stabilize national transportation system in circumstances of extraordinary disruption
50-51	Powers to gather and keep confidential transportation information
52	Require the Minster of Transport report annually on the state of transportation
53	Require review of the Act after four years

Part II	**Air Transportation**
56.1-56.7	Provide power to review mergers involving air transportation undertakings (2000)
59	Prohibit sale of air services unless the carrier holds an appropriate licence Special provisions for Northern air service eliminated
61, 69, 73	New financial fitness requirements for domestic and international licence holders
64-65	Notice of discontinuance of air service strengthened (2000)
66-67.2	Power to deal with unreasonable air fares and compliance with tariffs strengthened (2000)
85.1	Office of Air Travel Complaints Commissioner created (2000)
Part III	**Railway Transportation**
90-94	Certificates of fitness to permit market entry for new railways granted on proof on insurability
112	Rates and terms and conditions of carriage established by the Agency must be fair and reasonable Requirement that rates be compensatory eliminated
140-146.1	New provisions dealing transfer and discontinuance of railway lines
147-152	Regulated grain rate cap repealed and replaced with grain revenue cap (2000)
Part IV	**Final Offer Arbitration**
159-169	90-day period for final offer arbitration reduced to 60 days; FOA extended to commuter and passenger rail operations, northern marine re-supply and grain; simplified process for smaller transactions established (2000)
Part V	**Transportation of Persons with Disabilities**
170-172	Jurisdiction of Agency extended to all parts of the transportation network under the legislative authority of Parliament; power to inquire into obstacles on own motion removed
Part VI	**General**
177-181	Improved administrative monetary penalty scheme
Part VII	**Repeals, Transitional Provisions, Consequential Amendments and Coming into Force**
	Railway Act repealed except for certain provisions that apply only in respect of Special Act companies
	Jurisdiction over commodity pipelines transferred from Agency to National Energy Board
	Provision for railways to expropriate under the *Expropriation Act*
	Repeal of public interest rate investigations
	Jurisdiction of Agency over transportation mergers repealed

Public and Private Acts Affecting Transportation

As described in Chapter 18, the Minister of Transport has responsibility for administering a large number of transportation-related laws, in addition to the *Canada Transportation Act*. In addition, some acts of Parliament with implications for transportation are the responsibility of ministers other than the Minister of Transport. All these pieces of legislation are set out in the next table.

Public Acts (in addition to the *Canada Transportation Act*) for which the Minister of Transport is responsible

Airport Transfer (Miscellaneous Matters) Act	*Inter alia*, provides that no income tax is paid by airport authorities; authorizes seizure of aircraft for unpaid fees
Bills of Lading Act	Rules governing bills of lading
Blue Water Bridge Authority Act	One of two public acts dealing with bridges that are the responsibility of the Minister of Transport; amending Bill S-5 introduced January 31, 2001
Buffalo and Fort Erie Public Bridge Company Act	One of two public acts dealing with bridges that are the responsibility of the Minister of Transport
Canada Marine Act	Review of port fees for unjust discrimination; review of certain fees established by Seaway
Canada Shipping Act (Minister of Fisheries and Oceans also has responsibilities — Bill C-14, introduced March 1, 2001)	*Inter alia*, registration of ships
Carriage by Air Act	Establishes rights and liabilities of carriers, carriers' servants and agents, passengers, consignors, consignees and other persons in international air carriage
Carriage of Goods by Water Act	Sets out the rules regarding marine cargo liability on international traffic
Civil Air Navigation Services Commercialization Act	Appeal of air navigation charges to Agency
CN Commercialization Act	*Inter alia*, restricts CN's share ownership
Coasting Trade Act	Protection of Canadian shipping from competition by foreign vessels
Department of Transport Act	Regulation of canal tolls and use
Marine Insurance Act	Regulates marine insurance
Motor Vehicle Transport Act (Bill S-3, introduced January 31,2001)	Licensing

National Energy Board Act (ss. 108-111)	Construction of pipelines over navigable waters
Navigable Waters Protection Act	Approval required before interference with a navigable water
Northumberland Strait Crossing Act	Permits government to enter agreement
Pilotage Act	Mandatory user-pay marine navigation services
Railway Relocation and Crossing Act	Approval of urban transportation schemes involving railways
Railway Safety Act	Apportionment of costs of certain works between railways and others
Shipping Conferences Exemption Act (Bill C-14, introduced March 1, 2001)	Regulates international marine shipping rates; allows carriers to agree on rates
United States Wreckers Act	Exception to coasting trade provisions

Public Acts Affecting Transportation but not the responsibility of the Minister of Transport

Air Canada Public Participation Act	Recently amended as a result of airline restructuring

Bridge-related legislation:
Responsibility of Minister of Public Works and Government Services (except Fort-Falls Bridge Authority, Blue Water Bridge Authority, and Buffalo and Fort Erie Public Bridge Company)
Boucherville Islands Bridge and Tunnel
Campobello-Lubec Bridge
Fort-Falls Bridge Authority
LaSalle-Caughnawaga Bridge
Milltown Bridge
Pigeon River Bridge
Quebec Bridge and Railway
Queenston Bridge
Saint John Bridge and Railway Extension Company
Ste-Foy-St-Nicolas Bridge
Second Narrows Bridge, Burrard Inlet, B.C.
Valleyfield, Bridge over St. Lawrence
Van Buren Bridge Co. Agreement with H.M.

Canada Grain Act	Carriage of grain
Canadian Transportation Accident Investigation and Safety Board Act	
Canadian Wheat Board Act	Carriage of grain
Competition Act	
Canada Business Corporations Act	Provisions dealing with Special Act railway companies
Dry Docks Subsidies Act	
Expropriation Act	Powers of federal railways to expropriate land
Heritage Railway Stations Protection Act	
Oceans Act	Facilitates marine navigation

Private Acts related to Transportation

Hundreds of Private or Special Acts creating bridge, railway bridge and tunnel and railway companies	These Acts provide powers of these entities to construct and finance the entity and in some cases call for regulatory intervention regarding tolls and service.

Appendix 3
Design Considerations for the Proposed Roads and Transport Funding Agencies

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The Panel believes that some much needed discipline can be applied to road pricing and investment decisions through the use of 'road funds' or, more generally, funding agencies for roads and transport with defined objectives and a means of including users in agency decisions. The basic purpose of these agencies would be to

- promote efficient charges that reflect the costs of the activities engaged in by different classes of road users; and to
- promote spending decisions that will give road users the highest possible return on their funds.

In other areas of transportation infrastructure, the federal government has turned to the use of self-financing not-for-profit organizations to achieve more efficient service delivery. The agencies established to manage airports, ports, air navigation and the St. Lawrence Seaway provide useful models. The Panel sees merit in establishing such an agency, or agencies, for roads, with a mandate based on the principles of efficient management.

The model used for the infrastructure agencies must be adapted, however, to the particular economic and political features of the Canadian road system, to take account of several significant differences between roads and these other types of infrastructure:

- network interrelationships are much more important in roads;
- road access has been provided customarily, without explicit cost recovery, to all but the most remote communities;
- road operations, revenue collection and funding are managed by multiple jurisdictions; and
- fuel charges, licence fees and other road-related charges are important government policy concerns, not likely to be delegated to non-elected bodies unless the advantages are overwhelming.

In particular, these complicate the choice of which parts of the road network would be managed by the proposed new agencies and which revenue sources they would become responsible for.

At the same time, there are examples around the world of agencies or practices with at least some of the attributes the Panel believes should govern road and transportation funding and management.[1] They include the U.S. Highway Trust Fund, which is funded in part through dedicated revenues; Japan's Road Improvement Special Account, a road fund that includes both national and local taxes, as well as an oversight board; and forms of road fund approaching the World Bank's model in a number of developing countries. In addition, semi-autonomous operating agencies have been created to manage highways in the UK, Sweden, Finland, Spain, Ireland, and a number of developing countries. Finally, New Zealand has established the most comprehensive version of funding and management arrangements of the type the Panel proposes for Canada.

The evolution of the New Zealand approach is instructive. In 1989, a special operating agency, Transit NZ, was put in charge of the main highways system. It was placed under the direction of a board with user representation. Existing charges for road use were transferred to it, and it was given the authority for spending decisions on both maintenance and expansion. It was also given responsibility for joint funding of secondary roads (owned by local authorities) and for funding urban transit or alternatives to roads in other modes, if they were more cost-effective than road spending.

After Transit NZ had been in place for five years or so, it was judged that the agency's spending was favouring primary highways, to the relative neglect of secondary roads and alternatives to roads. In 1996, a new agency, Transfund NZ, was created to remedy this. It is entirely a funding agency (not an operational provider of any services), receiving revenues from the government and allocating them among the competing demands for maintenance and expansion of the primary highways (still operated by Transit NZ), local authority roads, urban transit, and investment projects in modal alternatives. Its 5-person board is now composed of two representatives of Transit NZ, one representative of road users, one of local authorities, and one representing 'other public interests'.

Options for Roads and Transport Funds in Canada

The road fund concept emphasizes effective management to achieve efficient resource allocation. The idea is to discipline decisions on road spending by requiring that a network be self-sufficient from its revenues and by establishing a decision-making body in which the road users obliged to pay for the system have a major say in how the money is spent. These decision makers would naturally be inclined to minimize spending and charges to create their desired system. They would want to charge as directly as possible for costs occasioned, in order to economize on those costs — encouraging the types of vehicles and patterns of road use that reduced those costs. Users would seek to maintain the network in a way that minimized its life-cycle costs and to spend on expansion projects that maximized the benefits they obtained from the user charges they paid.

The simplest type of road fund would therefore be one responsible for achieving self-sufficiency in the infrastructure costs of a defined and viable network. Imposing additional public interest objectives — such as supporting less viable feeder roads or incorporating environmental charges — would require careful design, because of the added complexity and to avoid diluting the internal discipline of the self-sufficient network. Charging for external social costs such as pollution would substantially complicate the design, as those charges should not be allocated to network improvement (but should be used possibly to reduce distorting taxes elsewhere). Such charging also requires a public consensus that does not yet exist and is probably a more remote prospect than converting existing infrastructure charges to a new funding agency, which is possible immediately.

The simplest design would be a *highway agency* responsible for the infrastructure costs of the primary highway system. Such a network would include the parts of intercity highways that pass through cities, but not other essentially urban highways or expressways. That network, in any province or nationally, could clearly be self-sufficient from user fees.

A key question would be which existing revenues to assign to a highway agency initially. In the long term, the agency could adopt efficient charges aimed precisely at its needs. But initially some or all existing fuel taxes and licence fees would be allocated to it. An initial model might see the federal and provincial government allocating the estimated fuel tax revenues generated on the primary highway system to the highway agency for that province. The remainder would be allocated for use on secondary highways and municipal roads. It would probably also be reasonable to assign only some portion of annual licence fees to the agency (probably on the basis of vehicle-kilometres), with the rest remaining for use on other roads. (At present provincial fuel taxes and licence fees are allocated mostly to provincial road authorities, though transfers for roads from provinces to municipalities could be interpreted as originating in the fees and fuel taxes.)

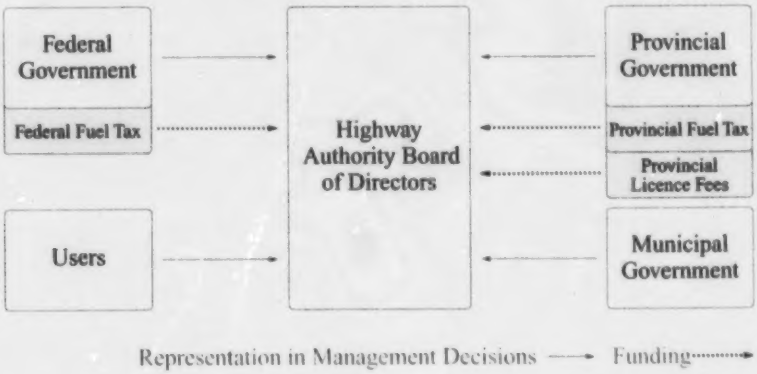
A province's highway agency should be directed by a board that includes representatives of users, possibly motorists and trucking associations, as well as the government(s) involved. (The model would be that of Transit New Zealand.) It would probably not have the authority to set its own charges at first, but should be given the task of advising the relevant minister on appropriate charges (and doing the necessary research).

The agency would receive the revenues from the assigned charges and would have authority for all expenditures on the network. It might be given authority to borrow for network investment, pledging only future revenues. It would need to budget for network maintenance expenditures, based on life-cycle costing models. It would consider proposals for investments in network improvement and expansion and allocate funds to them based on its own assessments of priorities. It should be required to report comprehensively on network performance, costs and expenditures and be subject to external review.

A schematic representation of this type of agency is shown in Figure 1.

Schematic of Provincial Primary Highway Agency

Figure 1


Federal Government
Federal Fuel Tax
Users
Highway Authority Board of Directors
Provincial Government
Provincial Fuel Tax
Provincial Licence Fees
Municipal Government
Representation in Management Decisions
Funding

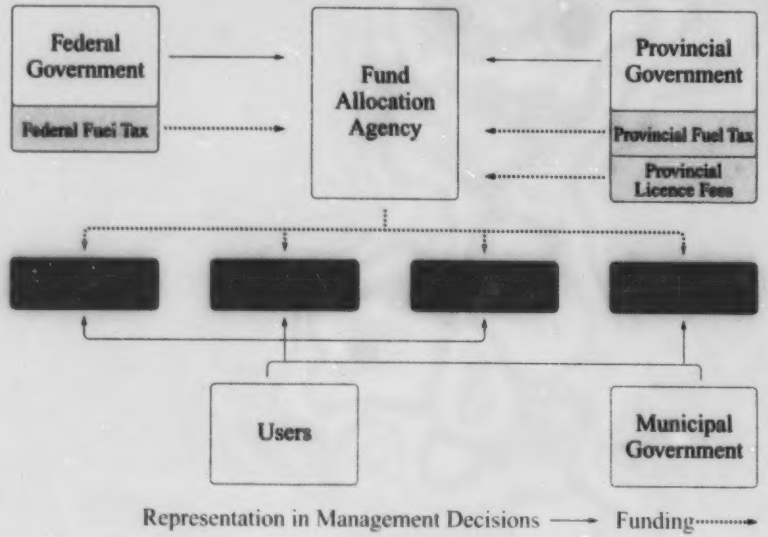
A broader design would be a *highway and rural roads agency*, with responsibility for secondary highways and main rural arterial roads, in addition to primary highways. At present those additional roads are normally funded partly by the province or territory and partly by regional or municipal authorities, from property taxes. If the agency were to be self-sufficient, it would need to have assigned to it sources of sufficient additional revenues to pay for the added network. This would include the relevant fuel taxes and proportions of licence fees; but it is not likely that traffic volumes on the secondary roads would generate enough revenues from those sources to replace all current regional or municipal spending, given the breadth of these rural networks (particularly in Prairie provinces, for example). Some regional or municipal contribution would still be necessary. A simple solution would be for the agency to pay a fixed proportion of the amounts required to maintain and expand the secondary network. (The New Zealand solution is to pay 50% of the costs of such work.)

Conceivably, municipal roads and streets could also be added to the agency's responsibilities — so that it managed all highways, rural and urban roads. In practical terms, however, the differing objectives for municipal streets in providing access and other services, the alternatives to vehicle use available for them, and general municipal planning objectives, separate from transport planning, suggest that municipal road decisions should remain with that level of government. If self-sufficient funding and management agencies were set up for highway networks, it would be appropriate to assign the relevant portions of fuel taxes and licence fees collected from municipal roads to municipal authorities.

Similarly, in larger urban areas, it would be appropriate to consider instituting urban transport authorities, expanding on the examples now in place: TransLink in Greater Vancouver and AMT in Greater Montreal. These agencies should have responsibility for self-sufficiency and governance, again involving users in charging and spending decisions. They should permit alternatives to road spending, such as transit system expansion, to compete for funds from the road agencies.

Alternatively, if the aim were to have a single *roads and transport agency* in each province/territory, which funded cost-effective alternatives as well as roads, it should have the revenue sources and network responsibility for at least the major urban links. It might in fact be appropriate to make it responsible for all urban public transport subsidies. The model for this

Schematic of Fund Allocation Agency


Federal Government
Federal Fuel Tax
Fund Allocation Agency
Provincial Government
Provincial Fuel Tax
Provincial Licence Fees
Users
Municipal Government
Representation in Management Decisions
Funding

management approach is Transfund New Zealand. A schematic illustration of such an agency is shown in Figure 2.

Finally, if the Panel's proposals in Chapter 11 were adopted, they envisage the federal government negotiating the transfer of responsibility for other primarily intraprovincial services, including passenger rail services and ferries, to the provinces. In this case, negotiations would probably require the federal government to transfer some capitalized amount, or annual payment, to the province in question. These funds would be added to the revenues of the new funding agency, which would then have full authority to decide how to spend them — on the services for which they were negotiated, or on any higher priority, notably including alternative bus services, but also urban transit or roads.

In conclusion, the Panel suggests that the potential efficiencies of such agencies should make it worthwhile for the federal government to allocate fuel tax revenues to the other governments. The precise design and management approach would need careful thought and would probably be the subject of serious negotiation among the governments concerned.

Notes

[1] Examples from I.G. Heggie and P. Vickers, *Commercial Management and Financing of Roads*, Technical Paper No. 409, World Bank, Washington, 1998.

Appendix 4
Submissions and Consultations

The following authorities, agencies, organizations and individuals submitted written briefs to the Panel and/or participated in the Panel's consultation meetings.

Agence métropolitaine de transport
Agricore Cooperative Ltd.
Aikins, MacAulay & Thorvaldson Barristers and Solicitors
  (Transportation Law Group)
Air Alma Inc.
Air Canada
Air Canada Regional Inc.
Air Transat
Air Transport Association of Canada
Alberta Association of Municipal Districts and Counties
Alberta Chambers of Commerce
Alberta Department of Infrastructure
Alberta Department of Transportation
Animal Nutrition Association of Canada (BC Division)
Association des armateurs du Saint-Laurent
Association des propriétaires d'autobus du Québec
Association of American Railroads
Association of Canadian Port Authorities
Association of Consulting Engineers of Canada
Association of Manitoba Municipalities
Association of Yukon Communities
Beingessner, Mark and Connie
Beingessner, Paul
Better Environmentally Sound Transportation
Blue Water Bridge Authority
Bombardier Transport
British Columbia Agriculture Council
British Columbia Air Merger Consortium
British Columbia Chamber of Commerce
British Columbia Maritime Employers Association

British Columbia Ministry of Transportation and Highways
British Columbia Railway Company
Brotherhood of Locomotive Engineers
Brotherhood of Maintenance Way Employees
Buffalo and Fort Erie Public Bridge Authority
Business Council of British Columbia
Canada 3000 Airlines Ltd.
The Canadian Arctic Railway Corporation
Canadian Airports Council
Canadian Association of Railway Suppliers
Canadian Automobile Association
Canadian Bus Association
Canadian Chamber of Commerce
Canadian Chemical Producers' Association
Canadian Fertilizer Institute
Canadian Hard of Hearing Association (Newfoundland Chapter)
Canadian Hearing Society
Canadian Industrial Transportation Association
Canadian National Railway Company
Canadian Oilseed Processors Association
Canadian Pacific Railway Company
Canadian Pulp and Paper Association
Canadian Shipowners Association
Canadian Shippers Council
Canadian Shippers' Summit
Canadian Special Crops Association
Canadian Transportation Agency
Canadian Trucking Alliance
Canadian Urban Transit Association
Canadian Wheat Board
Canadians for Responsible and Safe Highways
Cando Contracting Ltd.
Carlton Trail Railway
Centre for Sustainable Transportation
Chamber of Maritime Commerce
Chamber of Shipping of British Columbia
Charlottetown Airport Authority Inc.
City of Burnaby
City of Delta

City of Medicine Hat
City of Surrey
City of Vancouver
City of Yellowknife
Coalition to Renew Canada's Infrastructure
Competition Bureau, Industry Canada
Congress of Union Retirees of Canada
Conseil régional de développement de l'île de Montréal
Council of Canadians with Disabilities
Council of Marine Carriers
Farmer Rail Car Coalition
Federal Bridge Corporation Limited
Federation of Canadian Municipalities
Ferroequus Railway Company Ltd.
GO Transit
Greater Charlottetown Area Chamber of Commerce
Greater Fredericton Airport Authority Inc.
Greater Halifax Partnership
Greater Peterborough Area Economic Development Corporation
Greater Toronto Services Board
Greater Vancouver Gateway Council
Green, Christopher
Groupe Desgagnés Inc.
Guide Dog Users of Canada
Halifax Port Authority
Halifax Shipping Association
Hudson Bay Railway
Hudson Bay Route Association
Hume, Forrest C.
Independent Transition Observer, Air Restructuring (Debra Ward)
Infrastructure Council of Manitoba
Interested Carriers Working Group
International Association of Machinists and Aerospace Workers
International Aviation Terminals Inc.
ITL Solutions
Jablonski, Margaret
Kéroul
Keystone Agricultural Producers, Inc.
Kitikmeot Business Development Centre

Luscar Ltd.
Manitoba Department of Transportation and Government Services
McCann, David
McCreath, Hon. Peter L.
Mercer Management Consulting
Metropolitan Halifax Chamber of Commerce
Mining Association of Canada
Ministère des transports du Québec
Mitchell, John
Morningstar, Bill
Motor Coach Canada
National Farmers Union
NAV Canada
New Brunswick Department of Transportation
Newfoundland and Labrador Department of Works, Services and Transportation
Newfoundland and Labrador Federation of Municipalities
Niagara Falls Bridge Commission
Northwest Corridor Development Corporation
Northwest Territories Council for Disabled Persons
Northwest Territories Department of Transportation
NOVA Chemicals Corporation
Nova Scotia Department of Transportation and Public Works
Nunavut Department of Community Government and Transportation
OmniTRAX, Inc.
Ontario Ministry of Transportation
Ontario Motor Coach Association
Ontario Trucking Association
P.E.I. Department of Transportation and Public Works
P.E.I. Ports Study Group
PCI Chemical Canada Inc. (Pioneer)
Port of Montreal
Port of Saint John
Prince Rupert Grain Ltd.
Prince Rupert Port Authority
PROLOG Canada Inc.
Propane Gas Association of Canada Inc.
Public Interest Advocacy Centre
Quebec North Shore and Labrador Railway

Rail Ways to the Future Committee
Railway Association of Canada
Rocky Mountaineer Railtours
Saint John Airport Inc.
Saint John Port Authority
Saskatchewan Association of Rural Municipalities
Saskatchewan Highways and Transportation
Saskatchewan Pulse Growers
Saskatchewan Urban Municipalities Association
Saskatchewan Wheat Pool
Sheppard, Lorne
Shipping Federation of Canada
SMT (Eastern) Ltd.
Société de développement économique du Saint-Laurent
Société des chemins de fer du Québec Inc.
Southern Railway of British Columbia Ltd.
St. Lawrence Seaway Management Corporation
Sultran Ltd.
Teck Corporation
Tougas, François E. J.
Tourism British Columbia
Tourism Industry Association of Canada
Tourism Industry Association of Nova Scotia
Tourism Industry Association of the Yukon
Train-Residents' Action Committee
TransLink
Transport 2000 Atlantic
Transport 2000 Ontario
Transport Canada
Transportation Safety Board of Canada
Trimac Corporation
Tripartite Shippers' Group
Union of Municipalities of New Brunswick
United Grain Growers
United Transportation Union
Urban Development Institute/Ontario
Van Horne Institute
Vancouver International Airport Authority
Vancouver Port Authority

VIA Rail Canada Inc.
Village of Ethelbert
Village of Stenen
Village of Wood Mountain
Wabush Mines
Weldwood of Canada Ltd.
West Central Road & Rail Ltd.
West Coast Express
Western Canadian Shippers' Coalition
Western Canadian Wheat Growers Association
Western Grain Elevator Association
Western Rail Coalition
Western Transportation Advisory Council
Wild Rose Agricultural Producers
Winnipeg Chamber of Commerce
Yukon Department of Community and Transportation Services
YVR Business Forum

Submissions of a technical nature were also received from the following parties:

Baumol, William J. (on behalf of CN)
Edsforth, John (on behalf of the Canadian Shippers' Summit)
Gaudry, Marc
Goodmans (on behalf of OmniTRAX)
Lermer, George (on behalf of CPR)
Levine, Dr. Harvey (on behalf of Canadian Shippers' Summit)
Ogilvy Renault Barristers and Solicitors (on behalf of CN)
Stikeman Elliott Barristers and Solicitors (on behalf of CN)

Consultations

September 7–8, 2000	Ottawa
September 15–16	Saskatoon
September 18–19	Ottawa
September 28–29	Vancouver
October 2	Calgary
October 3–5	Edmonton
October 16–17	Quebec City
October 18–19	Montreal
October 24–26	Winnipeg
October 31–November 3	Toronto
November 8–9	Regina
November 20	Halifax
November 21–22	Ottawa
December 11	Ottawa
January 17, 2001	Ottawa
January 30	Iqaluit
February 1	Ottawa
February 5	Charlottetown
February 6	St. John's
February 7	Fredericton
February 26–27	Winnipeg
March 19–21	Montreal
March 23	Vancouver
March 26	Whitehorse
March 27	Yellowknife
March 28	Calgary
April 4–6	Toronto
June 4–5	Washington, D.C.

Appendix 5
Secretariat Staff and Contractors

Emile Di Sanza	Executive Director
Lorraine LeVasseur	Executive Secretary

Administration

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Maurice Lacasse	Finance & Administration
Melody Miller	Finance & Administration
Mike Boland	Records Manager
Claire Dufresne	Human Resources
Caroline Guénette	Receptionist
Troy Dell	LAN Support

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Laura Gunn	Communications Coordinator
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Sylvie Robitaille	Consultations Analyst
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David Hackston	Research Consultant
John MacDonald	Research Consultant

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Aubut & Nadeau Design Communications
Centre for Legislative Exchange
ComTra, Inc.
Brad Mann Communications Inc.
Infolink Consultants Inc.
Francine Nantel
Neufeld Group
Nurun-Ottawa
Ponytail Communications
RANA International Inc.
Transportation Partners International (S. Barone)

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Norman C. Bonsor
Michel Boucher
Kenneth Button
Charles Rivers Associates Incorporated
Garland Chow
The Conference Board of Canada
David Gillen
John Gratwick
Peter Haanappel, Leiden University
Trevor Heaver
HLB Decision Economics Inc.

InterVISTAS Consulting Inc. (MichaelTretheway)
Michael Ircha
Bangqiao Jiang
K & K Realty Corp.
Kieran Management Advisory Services Ltd.
Richard Lake
Fred Lazar
Lehman & Associates
Pollution Probe (Ken Ogilvie)
Peter J. Milne & Associates
Steven Morrison
Fred Nix
The Mariport Group (Christopher Wright)
The Regulatory Consulting Group Inc. (Margot Priest)
Research and Traffic Group
Harvey M. Romoff Consulting Inc.
Thomas Ross
RRF Human Development Consultants (David W. Flicker)
Richard Soberman
William Stanbury
Three Stars Research Corp. (Tae Oum)
TIA Telecommunications Issues and Analysis (George Hariton)
Trans-Group
Michael J. Trebilcock and Edward M. Iacobucci
University of Manitoba Transport Institute (Barry Prentice)
Western Transportation Advisory Council (WESTAC)

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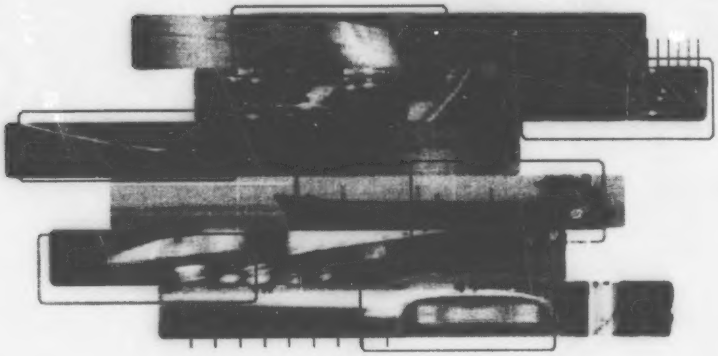
Patrick J. Monahan
Deana Silverstone

CANADA
TRANSPORTATION
ACT REVIEW

EXAMEN DE LA LOI
SUR LES TRANSPORTS
AU CANADA



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The Review Panel, constituted under Section 53 of the *Canada Transportation Act*, has initiated a comprehensive examination of the operation of the Act and related legislation.

The Panel will assess the overall effectiveness of the current legislative framework to provide the basis for the kind of transportation system which Canadians need. In conducting its assessment, the Panel will consult with purchasers and suppliers of transportation services and other parties as appropriate. The Review Panel will make recommendations as necessary and desirable relative to the national transportation policy and the legislation.

Interested parties are invited to submit their views and comments on issues within the purview of Review Panel's mandate. Terms of reference are available by contacting the Review Panel at www.reviewcta-examenltc.gc.ca or at the address below:

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List of Recommendations

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List of Recommendations

Recommendation 5.1
The Panel recommends that sections 113 to 115 of the *Canada Transportation Act* be replaced with a requirement that a railway publish in its tariff the level of service attached to rates in the tariff.

Recommendation 5.2
The Panel recommends that the Canadian Transportation Agency continue to have the authority to determine whether a railway has met the level of service commitments in a tariff or confidential contract and, in the event of a breach, to order the railway to take specific steps to meet those commitments.

Recommendation 5.3
The Panel recommends that the existing interswitching limits be retained.

Recommendation 5.4
The Panel recommends that section 128 of the Act, requiring the Canadian Transportation Agency to determine fixed interswitching rates, be amended to allow the Agency to prescribe maximum rates, leaving it open to shippers and railways to enter into commercial arrangements for lower interswitching rates, if appropriate.

Recommendation 5.5
The Panel recommends transforming the competitive line rate provisions of the *Canada Transportation Act* into competitive connection rate (CCR) provisions by

- **removing the requirement that shippers obtain an agreement with a connecting carrier before requesting the rate from the Canadian Transportation Agency;**
- **making the remedy available only to shippers with no "alternative, effective, adequate and competitive" means of transporting the goods that would be subject to the rate and where the Agency determines that the rate is substantially above rates paid by other shippers of the specific commodity under similar conditions and that cannot be explained by apparent cost and value of service considerations;**

- requiring the shipper and the railway to attempt to negotiate a new rate within a 30-day period after the Agency determines that a CCR is required;
- requiring the Agency, where the shipper and carrier do not agree on the rate, to establish a CCR, subject to the commercially fair and reasonable test of section 112, with the rate falling in the range of the 75th percentile to the 90th percentile of revenue per tonne-kilometre for movements of the same commodity over similar distances and under the same conditions and levels of service as the CCR portion, together with the interswitching rate for the first 30 kilometres;
- allowing for a CCR to be established by the Agency for a period of one year;
- prohibiting the shipper from requesting final offer arbitration of any rate being reviewed or established under the CCR process;
- prohibiting the shipper from requesting final offer arbitration for the portion of the movement by the connecting carrier;
- prohibiting the shipper from requesting a CCR for a rate established by final offer arbitration; and
- giving the Governor in Council authority to suspend the CCR provision if it determines that railway viability is seriously affected by the operation of the CCR provision.

Recommendation 5.6
The Panel recommends that the substantial commercial harm test in sections 27(2), (3) and (5) of the *Canada Transportation Act* be repealed.

Recommendation 5.7
The Panel recommends that the Canadian Transportation Agency, when establishing interswitching rates and competitive connection rates, continue to be guided by the requirement that rates it establishes be commercially fair and reasonable to all parties.

Recommendation 5.8
The Panel recommends that an arbitrator be required, in every arbitration, to consider whether a shipper has alternative, effective, adequate and competitive means to transport the goods that are the subject of the arbitration.

Recommendation 5.9
The Panel recommends that the grain handling and transportation system be moved to a more commercial basis, which could lead to repeal of the revenue cap on grain rates.

Recommendation 5.10
The Panel recommends that any railway operator, whether under federal or provincial jurisdiction, have the right to apply to the Canadian Transportation Agency for running rights, provided the operator meets all necessary operating and safety standards and is adequately insured.

Recommendation 5.11
The Panel recommends that the running rights provision of the *Canada Transportation Act* be amended to allow an applicant to seek traffic solicitation rights.

Recommendation 5.12
The Panel recommends that a railway operator proposing to apply to the Canadian Transportation Agency for running rights be required to advise the infrastructure owner at least 60 days before making the application to encourage negotiations between the parties.

Recommendation 5.13
The Panel recommends that, as part of its public interest determination on a running rights application, the Canadian Transportation Agency consider, at a minimum,

- **the adequacy of existing service,**
- **the existence of competitive alternatives,**
- **the impact on all users and shippers on lines where running rights are sought,**
- **the impact on system efficiency,**
- **the financial and operational capability of the applicant,**
- **the willingness of the applicant to allow reciprocal access to its lines where applicable, and**
- **the impact on the financial viability of the infrastructure owner.**

Recommendation 5.14
The Panel recommends that guest operators with traffic solicitation rights

- **have the obligation to publish rates at the request of a shipper and to specify the level of service to be provided as part of published tariffs,**
- **have the right to enter into confidential contracts with shippers, and**
- **have authority to limit liability for loss or damage of a shipper's goods only in accordance with section 137 of the *Canada Transportation Act*.**

Recommendation 5.15
The Panel recommends that interswitching, competitive connection rates and final offer arbitration be suspended with respect to the movement of traffic on lines served by an infrastructure owner and one or more guest operators with traffic solicitation rights.

Recommendation 5.16
The Panel recommends that running rights orders issued by the Canadian Transportation Agency include a requirement that the guest operator provide reasonable notice when it intends to withdraw service on a line.

Recommendation 5.17
The Panel recommends that running rights compensation be negotiated between the parties. If the parties are unable to reach a commercial agreement in 90 days, either party could ask the Canadian Transportation Agency to set compensation in accordance with the Panel's rail access pricing proposals.

Recommendation 5.18
The Panel recommends that, where traffic solicitation is sought, the rail access charge consist of

1. **compensation for all incremental costs the guest railway imposes on the host; and**
2. **a contribution to the common costs of rail ownership that approaches the implicit contribution the infrastructure owner is earning on the specific traffic being solicited.**

Recommendation 5.19
The Panel recommends that the following considerations be used as a guide in determining compensation for track access without traffic solicitation rights:

- **access fees should cover all incremental costs the host incurs as a result of the guest railway's operations;**
- **access fees that differentiate among users on the basis of the value they place on rail access should be permitted;**
- **access fees based on differential pricing should not be allowed to help infrastructure owners generate more revenue than they need in total to cover costs, including a reasonable return on their investment; and**
- **access fees for government-owned or -directed passenger and commuter rail services should be limited to an amount that compensates infrastructure owners for the additional costs they incur, including congestion and delay costs, and provides a reasonable after-tax return on the book value of the capital assets used by the guest.**

Recommendation 5.20
The Panel recommends that the Minister of Transport ensure that implementation of the access proposals recommended in this report comply with all applicable requirements of international and internal trade law.

Recommendation 5.21
The Panel recommends that railways be required to identify and publish a list of rail sidings in operation on their network and available for producer car loading. The Panel recommends further that railways be required to give 60 days' public notice before removing a siding from operation.

Recommendation 6.1
The Panel recommends the establishment of a new process for reviewing proposed transportation mergers, either within modes or cross-modally, to examine issues of broad national or transnational interest separately from competition issues considered under the merger review provisions of the *Competition Act*.

Recommendation 6.2
The existing *Competition Act* process should continue to be used to evaluate whether a proposed merger in the transportation sector would prevent or lessen competition.

Recommendation 6.3
The proposed public interest review process would have the following steps:

1. **Parties notify the Minister of Transport of the proposed merger at the same time notice is served to the Commissioner of Competition.**
2. **The notice to the Minister includes a statement of public interest impact, including**
   - **the objectives of the merger;**
   - **the impact of the merger on the transportation sector concerned and on the industry sectors it serves;**
   - **possible costs and benefits to shippers or passengers;**
   - **implications with respect to network rationalization and the labour force;**
   - **the regional impact of the merger;**
   - **the impact of the proposed merger on the overall structure of the transportation sector concerned; and**
   - **remedial or mitigating actions proposed by the merging parties to address public interest concerns.**
3. **If the Minister concludes there are significant public interest issues related to the proposed merger, he/she would appoint a public interest evaluator to evaluate the proposed merger.**
4. **The public interest evaluator evaluates public interest issues identified by the Minister, based on the statement of public interest impact provided by the parties to the proposed merger, and can hold hearings to receive input on public interest issues.**
5. **Parties to a merger may amend the statement of public interest impact in response to concerns expressed by the public interest evaluator on public interest issues.**
6. **The public interest evaluator interacts with the Competition Bureau to discuss and co-ordinate their respective investigations.**
7. **At the conclusion of the evaluation, the public interest evaluator reports to the Minister, recommending, with respect to public interest issues, that the proposed merger**
   - **be allowed to proceed;**
   - **be allowed to proceed, subject to specified conditions; or**
   - **not be allowed to proceed.**

8. After receiving the report of the public interest evaluator, the Minister reviews it and makes a recommendation to the Governor in Council.
9. Approval should be subject to any conditions the Governor in Council considers relevant to protect the public interest.
10. Where the Governor in Council approves a merger subject to the parties to the merger meeting conditions to protect the public interest, a process to ensure compliance through monitoring and enforcement must be put in place.
11. The Competition Bureau and the public interest evaluator should be encouraged to work closely with the appropriate authorities in other countries when considering transnational mergers.

Recommendation 6.4
The Panel recommends that the proposed merger review process apply to all transportation modes under federal jurisdiction.

Recommendation 7.1
The Panel recommends that the government enter into negotiations with the United States and Mexico to create a North American Common Aviation Area in which carriers from Canada, the U.S. and Mexico would compete freely.

As a back-up option if negotiations do not succeed, the Panel recommends that the government negotiate with other countries for the reciprocal granting of modified sixth freedom rights and of rights of establishment for foreign-owned domestic carriers.

Recommendation 7.2
The Panel encourages the government to pursue actively Canada's interest in a more liberal international environment for air services.

Recommendation 7.3
The Panel recommends that the limit on the voting shares of Canadian airlines that can be held by foreigners be raised to 49%.

Recommendation 7.4
The Panel recommends that carriers be given recourse to the Canadian Transportation Agency for disputes over access to airport facilities and that the Agency be given power to provide an

appropriate remedy in situations where airlines are found to be subject to unfair treatment in terms of prices charged or type and quality of services provided.

Recommendation 7.5
The Panel recommends that the maximum annual domestic passenger revenues used to determine eligibility for access to Air Canada's frequent flyer program be raised to $500 million. The Panel recommends further that the requirement to provide access to Aeroplan be extended until the Minister of Transport determines that competition in the domestic market has strengthened to the point where it is no longer necessary.

Recommendation 7.6
The Panel recommends that the *Canada Transportation Act* be amended to remove the Canadian Transportation Agency's powers to review passenger and cargo fares on monopoly routes upon complaint; to order additional fare classes on monopoly routes if these are available on similar competitive routes; and to audit carriers proactively and take appropriate action.

Recommendation 7.7
The Panel recommends that the government require Air Canada to provide 180 days' notice of services it plans to terminate in the first six months of 2003.

Recommendation 8.1
The Panel recommends that full recovery of the costs of marine services attributable to users be pursued as a long-term goal.

Recommendation 8.2
The Panel recommends that opportunities to commercialize marine services be sought.

Recommendation 8.3
The Panel recommends that the government make clear its commitment to eventual elimination of the liner conference exemptions from competition law and that it actively pursue multilateral agreement among international partners to do so.

Recommendation 8.4
The Panel recommends that the government make clear to the government of the United States its preference for eliminating the

restrictions on entry to domestic shipping in the *Coasting Trade Act* and offer to negotiate bilateral elimination of equivalent restrictions.

Recommendation 8.5
The Panel recommends that the 25% duty on vessels built or purchased outside Canada be eliminated.

Recommendation 9.1
The Panel recommends that principles be developed to govern the setting of airport fees for aeronautical services; that airports be required to provide adequate notice of their intention to revise charges to airlines; and that, in the case of disputes over adherence to the principles or process, there be a right of complaint to the Canadian Transportation Agency.

Recommendation 9.2
The Panel recommends that

- **a for-profit subsidiary of an airport authority be allowed to provide a service to the airport only if it is the successful bidder in a fair and open competitive tendering process;**
- **if an airport authority in its own right (rather than through a subsidiary) undertakes activities that compete with commercial firms, it be required to demonstrate that the decision is in the airport's financial interest; and**
- **airport land use regulations be required to adhere to basic rules of fairness and equity, including the requirement that affected parties be adequately notified and consulted about proposed changes in airport policy.**

Recommendation 9.3
The Panel recommends that legislation be introduced specifying governance requirements for LAAs and CAAs and indicating the penalties that can be imposed in cases of non-compliance.

Recommendation 9.4
The Panel recommends that well defined limits be placed on airport authorities' use of for-profit subsidiaries.

Recommendation 9.5
The Panel recommends that the airport authorities' legislated exemption from the *Income Tax Act* be removed.

Recommendation 9.6
The Panel recommends that airports be required to put in place comprehensive performance measurement systems that adhere to guidelines developed by Transport Canada. For major proposed capital projects, airports should be required to undertake an economic assessment, consult with airport users, and ensure that stakeholders' positions are made known to interested parties.

Recommendation 9.7
The Panel recommends that Transport Canada review its proposed Aircraft Emergency Intervention Services regulations to determine whether the standards are appropriate based on a careful assessment of costs and benefits.

Recommendation 9.8
The Panel recommends that a limited program of support be introduced to help smaller airports cover their operating expenditures. The program should be financed from air system revenues and be designed to encourage improved efficiency and create incentives for airport rationalization.

Recommendation 9.9
The Panel recommends that the provisions of the *Canada Marine Act* making the Crown responsible for liabilities of Canada Port Authorities be removed.

Recommendation 9.10
The Panel recommends that borrowing limits in the letters patent of Canada Port Authorities be removed.

Recommendation 9.11
The Panel recommends that the number of directors on Canada Port Authority boards appointed directly by the Minister of Transport be reduced to two.

Recommendation 9.12
The Panel recommends that well defined limits be placed on Canada Port Authorities' use of for-profit subsidiaries.

Recommendation 9.13
The Panel recommends that

- **a for-profit Canada Port Authority subsidiary be allowed to provide a service to the port only if it is the successful bidder in a fair and open competitive tendering process; and**
- **if a port in its own right (rather than through a subsidiary) undertakes activities that compete with commercial firms, it be required to demonstrate that the decision is in the port's financial interest.**

Recommendation 9.14
The Panel recommends that Canada Port Authorities be required to develop comprehensive performance measurement systems and to make the resulting information publicly available.

Recommendation 9.15
The Panel recommends that a review of the *Canada Marine Act* be initiated by the beginning of 2002.

Recommendation 10.1
The Panel recommends that the World Bank/New Zealand concepts of road and transport funding and management agencies be adapted for Canada, including the following features:

- **users should pay for roads, by means of appropriate charges and fees;**
- **charges for roads should be based on costs imposed, differentiated so far as practical by nature of vehicle, type of road, and amount of congestion;**
- **managers of the road network should have responsibility for both charging and spending decisions;**
- **users should be involved in decisions on charges and expenditures; and**
- **alternatives to road spending in other modes should be allowed to compete for road funds.**

Recommendation 11.1
The Panel endorses initiatives to reduce subsidies to ferry services and recommends that commercialization and divestiture of responsibility for local service decisions to other levels of government continue.

Recommendation 11.2
The Panel recommends that the Minister of Transport continue the process already initiated to address regulatory fragmentation in the bus industry.

Recommendation 11.3
The Panel recommends that the National Safety Code be structured such that all vehicles carrying paying passengers are subject to a consistent pattern of safety regulation that takes into account the scale of the operation and risk exposure but does not rest entirely on vehicle size.

Recommendation 11.4
The Panel recommends that VIA's current services be reviewed to ascertain the extent to which they have become tourism products; if they have, they should be designated as such.

Recommendation 11.5
The Panel recommends a full cost recovery policy for Quebec City-Windsor corridor rail and its commercialization.

As a first step, corridor operations as a whole should be separated organizationally from VIA's other services. Management should be directed to pursue commercialization and to report cost recovery progress for each of the corridor services on a fully allocated basis. Management should be given full authority to terminate services that prove unsuccessful.

Recommendation 11.6
The Panel recommends that, after Quebec City-Windsor corridor services have been separated from the other routes that VIA Rail now operates, legislation be enacted to give the entity providing VIA corridor services the commercial freedom required to become and remain self-sufficient.

Recommendation 11.7
The Panel recommends that each rail service now subsidized to provide access to remote communities be reviewed to determine
- **the present level of remoteness;**
- **whether a federal contribution toward development of road access (by the province in question) might constitute a more effective and efficient solution to the access issue;**

- **whether an air, bus or other service, provided by the private sector, might prove superior to rail; and**
- **whether the private sector could provide an adequate rail service more economically under contract than is possible for VIA Rail.**

Recommendation 11.8
The Panel recommends that the policy of commercializing passenger services, including divestiture to the private sector and other levels of government, continue. Further, where federal subsidy of passenger travel is deemed desirable, federal financial support should be reassessed periodically and carrier- and mode-neutral mechanisms to allocate the subsidies in a manner that least distorts the commercial market should be used.

Recommendation 12.1
The Panel recommends that transit operating agencies and their funders seek the most cost-effective ways of improving their services.

Recommendation 12.2
The Panel recommends that experimentation with innovative forms of service (smaller vehicles, shared taxis) be encouraged.

Recommendation 12.3
The Panel recommends that urban transit be permitted to qualify for funding from road user charges.

Recommendation 12.4
The Panel recommends that payments to transit authorities be made on the basis of their actual performance in inducing shifts from private automobile use to transit.

Recommendation 13.1
The Panel recommends that section 118 of the *Canada Transportation Act*, as amended by the Panel's proposals, be made available to commuter authorities.

Recommendation 13.2
The Panel recommends that future commuter rail contracts be made public and that current contracts be made public unless one of the parties can demonstrate to the satisfaction of the Canadian Transportation Agency that the contract contains commercially sensitive information and that it would be harmed by its release.

Recommendation 13.3
The Panel recommends that section 145 of the *Canada Transportation Act* be amended to require that a railway offer lines it intends to discontinue to commuter rail authorities before offering them to a municipal or district government, provided the line has been identified officially as being required for urban transit purposes.

Recommendation 13.4
The Panel recommends that land being transferred under the *Canada Transportation Act* process at net salvage value be valued at no more than its 'across the fence' value, with no premium for assembly applied.

Recommendation 13.5
The Panel recommends that railway companies be required to offer for sale at net salvage value, to the relevant province, commuter authority or municipal government(s), a spur or other line not covered by the current transfer and discontinuance process, provided the line has been identified officially as being required for urban transit purposes.

Recommendation 13.6
The Panel recommends that the purchase of railway lines for use as urban transit corridors (including spurs identified through the process set out in the previous recommendation) qualify for funding consideration from the provincial and territorial roads and transport funds the Panel proposes.

Recommendation 14.1
The Panel recommends that the Canadian Transportation Agency be given the power to investigate accessibility matters on its own motion.

Recommendation 14.2
The Panel recommends that the attendant air fare issue be resolved as quickly as possible.

Recommendation 15.1
The Panel recommends that federal, provincial and territorial governments collectively recognize the need for a cohesive framework to govern the multiple elements of the trucking sector.

The Panel recommends further that jurisdictions establish a time frame for developing and implementing an effective framework to govern all elements of the trucking industry.

Recommendation 16.1
The Panel recommends the establishment of a co-operative program with the national carrier associations in all modes to facilitate and encourage the development of e-business and e-commerce skills and training in the application of the technologies.

Recommendation 16.2
The Panel recommends that the government continue to develop e-government initiatives aimed at streamlining both internal and government/industry communication processes.

Recommendation 17.1
The Panel recommends that the statement of objectives of national transportation policy in the *Canada Transportation Act* recognize the environmental goals of national policy.

Recommendation 18.1
The Panel recommends that the Minister of Transport take the necessary steps to make available for Canadian operations, carriers and airports information similar to that routinely available in the United States.

Recommendation 18.2
The Panel recommends that the government and transportation industries expand the collection of transportation data and develop new procedures to reflect changes occurring in the domestic and global economies.

Recommendation 18.3
The Panel recommends that the *Canada Transportation Act* be amended to ensure that transportation data can be shared across federal departments.

Recommendation 18.4
The Panel recommends that the Minister of Transport ensure that detailed information on the extent and cost of federally supported transport infrastructure or carrier services be made available and encourages similar actions by other levels of government.

Recommendation 18.5
The Panel recommends that penalties be introduced that will provide effective incentives to comply with data reporting requirements.

Recommendation 18.6
The Panel recommends that the restriction on monitoring in subsection 50(3) of the *Canada Transportation Act* be repealed.

Recommendation 18.7
The Panel recommends that the government increase its support for transportation research.

Recommendation 18.8
The Panel recommends that transport policy and legislation be guided by underlying principles, such as those identified in this report, that are common to all transportation modes.

Recommendation 19.1
The Panel recommends that provisions of *Canada Transportation Act* imposing an obligation or prohibiting specified actions without mandating the Canadian Transportation Agency to administer them be reviewed and, if necessary, amended to provide that the Agency can enforce them on complaint.

Recommendation 19.2
The Panel recommends that section 29 of the *Canada Transportation Act* be amended to give the Canadian Transportation Agency the power to extend the 120-day time limit on its own motion where not doing so would cause serious prejudice to a party. The Agency should be required to report the circumstances where it exceeds its statutory time limit in its annual report.

Recommendation 19.3
The Panel recommends that the Canadian Transportation Agency be given the statutory authority to engage in mediation and to establish rules setting out when mediation may be required before complaints or applications enter a formal decision process.

Recommendation 19.4
The Panel recommends that section 53 of the *Canada Transportation Act* be brought into line with the national transportation policy, as amended by the Panel's proposals.

Recommendation 19.5
The Panel recommends that the Minister of Transport consider whether legislative amendments are needed to give a review panel the power to compel the production of documents.

Recommendation 19.6
The Panel recommends that the Minister of Transport consider whether the existing exemption in section 98 of the *Canada Transportation Act* is appropriate.

Recommendation 19.7
The Panel recommends that the provisions of the *Canada Transportation Act* allowing railways to appoint police constables be repealed and that responsibility for policy questions on railway police issues be transferred to the appropriate government department.

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Additional Rail Info

Note on the Evidence About Competition in the Rail Freight Sector

This note describes data gathered on the extent of competition in the rail freight sector and highlights the key results. Sources include the Survey of Shippers conducted for the Canada Transportation Act Review Panel. **Read more...**

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The Role of Differential Pricing: Implications and Remedies

One of the more contentious issues in the shipper-railway relationship is 'differential pricing', which refers to the practice of railways charging different percentage mark-ups over variable costs, depending on the responsiveness of shippers' demand for rail services to changes in freight rates. The result is that some users pay more than others for a given quantity of goods shipped over a given distance. **Read more...**

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Note on Measurement and Behaviour of Rail Freight Rates

The Panel raised the following issue for consideration in its Interim Report:
While much of the railways' productivity gains has been passed on to shippers, this may differ considerably among commodities and markets. Are there specific market sectors that have not benefited from railway productivity gains? **Read more...**

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Note on the Evidence About Competition in the Rail Freight Sector

This note describes data gathered on the extent of competition in the rail freight sector and highlights the key results. Sources include the Survey of Shippers conducted for the *Canada Transportation Act* Review Panel (also included on this CD-ROM).

Summary of Findings

Concerning **intermodal competition**, the data suggest that the amount of rail, traffic that is actually contestable by truck is limited:

- Large volumes of resource-based bulk commodities are moved by rail in particular geographic areas for which trucking is not an option.
- Although it may be technically feasible to move half the rail freight by truck, this does not mean that trucking is a cost effective alternative for this traffic.
- Trucks and railways have inherent cost advantages, depending on the distances over which goods are transported.

Concerning **direct competition between railways**, the data suggest the following:

- An estimated two-fifths of Canadian rail traffic has access to direct rail competition. This is traffic that originates and terminates within 30 kilometres of points of interchange with a competitive railway. Moreover, this is likely to be the minimum amount of traffic with direct access.
- For grain traffic, the corresponding estimate is 24%. However, almost two-thirds (64%) of grain traffic originates and terminates within 100 kilometres of a competing railway, so that for a substantial amount of grain, trucking to an alternative rail line may be feasible.

Results from the Panel's Survey of Shippers are consistent with the view that **indirect competition** exists only for some markets:

- The survey confirmed some presence of market competition but could not quantify the impact on rates or service.

- A small number of rail shippers indicated that for some facilities they were able to use a different carrier by shipping to or from a different destination or by using a substitute product.

Although **market competition** does not appear to have had a significant overall influence, there may have been effects for individual commodities, such as coal:

- Over the period 1987 through 1998, changes in export prices do not appear to have been a dominant factor influencing changes in freight rates.

Intermodal Competition

The data suggest that the amount of rail traffic that is actually contestable by truck is limited.

Bulk Commodities

Large volumes of resource-based bulk commodities are moved by rail in particular geographic areas for which trucking is not an option. For example, there is little competition from truck for rail shipments of coal, potash, non-ferrous metals, sulphur, wood pulp and long-haul grain movements.

This is illustrated in figure 1, which shows rail tonnage by commodity as a percentage of total rail traffic and as a percentage of total rail plus truck traffic for each commodity. (The latter is for 1996, the most recent year available, and will not reflect the increased truck share of grain traffic.)

Figure 1

Rail Traffic by Selected Commodity

	% of Total Rail Tonnage, 1999	Rail Tonnage as % of Combined Rail & Truck Tonnage, 1996*
Grains	13.3%	86.9%
Coal	13.0%	98.3%
Potash	6.4%	99.9%
Wood pulp	4.0%	91.7%
Non-ferrous metals	3.5%	84.4%
Sulphur	3.2%	84.7%
Total	43.3%	

* Latest available

Source: Transport Canada

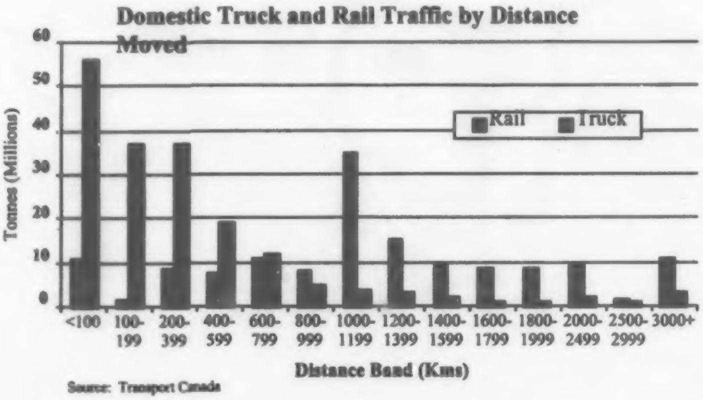
Potential for modal shifts

It is feasible to transport about half of rail freight by truck. In work done in 1998 for the Transportation Climate Change Table, Transport Canada found that for approximately half the rail freight traffic in Canada, there are movements by truck of the same commodity over the same origin and destination.[1] In its submission to the Panel, CN provided a similar estimate of the amount of rail traffic that could feasibly move by truck.[2]

Although it may be feasible to move half the rail freight by truck, this does not mean that trucking is an effective alternative for this traffic. This will depend on particular geographic or market circumstances such as shipment distance, existing mode share, traffic volumes and relative yields of the two modes.[3]

Figure 2, which shows the movement of rail and truck traffic over different distances for 1996, illustrates the role of distance. (These data are for total traffic, but competitiveness obviously varies by commodity. In grain, for example, trucks carry a much smaller proportion of the total freight, and the proportion falls rapidly above a distance of 400 kilometres.) Trucks and railways have inherent advantages over different lengths of haul, which are reflected in the graph. More than 50% of Canadian domestic truck traffic was moved over distances less than 200 kilometres, and more than 80% was moved over distances less than 600 kilometres. In contrast, more than 80% of rail traffic was moved over distances of more than 600 kilometres. If 600 kilometres were considered a rule of thumb for the limit at which trucking was competitive with rail, this would suggest that about 80% of total current rail traffic was not subject to competition from trucking.

Figure 2



Source: Transport Canada

Going a step further, of the 20% of rail traffic that moved less than 600 kilometres, 30% was accounted for by large volumes of bulk commodities moving short distances. If trucking was not a competitive option for these movements, of commodities such as gypsum and non-ferrous metal ores and concentrates, then about 14% was left of total rail traffic. Looking only at rail movements of less than 600 kilometres that were also in small shipments (of up to 10 cars only), only 8.8 million tonnes were carried, or 4.3% of total rail traffic in 1996.[4]

Thus, although there are truck flows that match about half of the rail markets, the potential competition is likely to be a lot less. In addition, in the Panel's survey, shippers using rail were asked whether shipping by truck or other mode was a viable option for them and, if so, for how many of their facilities. For the 98 shippers responding to the question, another mode was a viable option for 9% of all facilities.

Intramodal Competition (Direct)

Concerning direct competition between railways, the following evidence was compiled.

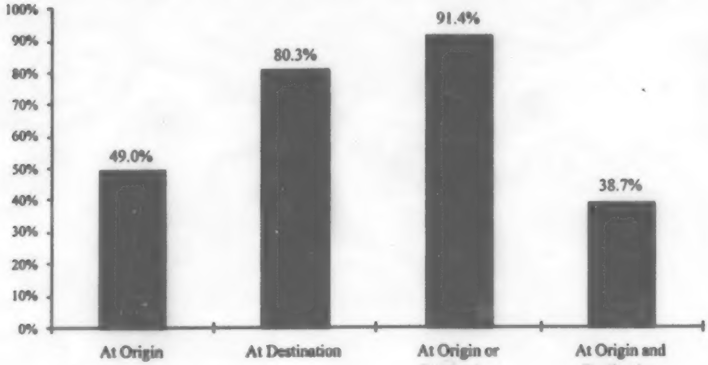
Interswitching

Information was obtained from Transport Canada on the proportion of rail freight tonnage that was within 30 kilometres of interchanges with a competitive railway – in other words, had access to interswitching. Data include CN and CPR traffic for 1999. Some interchange points were excluded where there did not appear to be a competitive option for the shipper, such as those with small feeder carriers.

When border crossings were excluded, the data indicated that 20.7% of rail traffic had access to interswitching at both origin and destination. When traffic passing through border points was included as competitive, the estimate of traffic that had competitive options at both origin and destination was 38.7% (see figure 3). This latter figure is similar to CN's estimate in its submission to the Panel that 41% of total CN and CPR traffic originates and terminates within 30 kilometres of interchange points.[5]

Figure 3

Percentage of Total Rail Freight Tonnage, 1999
within 30 km of Interchanges *(including border points)*



Source: Transport Canada

With transborder traffic included, the results indicate that about two-fifths of Canadian rail traffic has access to direct rail competition. This is the minimum amount of traffic with direct access. For shippers that can choose between destinations, access to interswitching at the origin only is sufficient to provide competitive access. In addition, the analysis is indicative only of the availability of direct competition at origin and destination. It does not consider the availability of competitive line rates, running rights or the possibility of interchanging traffic at points between origin and final destination.

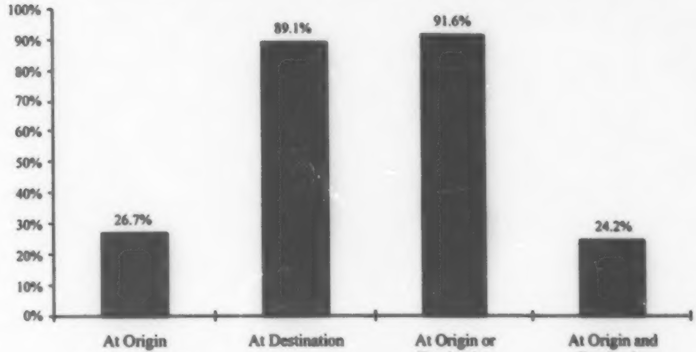
The preceding analysis uses traffic volume as the basis for measuring access to interswitching. In the Panel's survey, shippers using rail were asked about access to rail carriers. Excluding grain producers and terminal operators, shippers reported that, in 2000, 61% of their facilities had access to more than one railway or were within interswitching limits.

Grain

Figure 4 shows the situation with respect to grain. The data were again provided by Transport Canada and include border points as competitive options.

Figure 4

Percentage of Rail Freight Tonnage of Grain, 1999 within 30 km of Interchanges ***(including border points)***



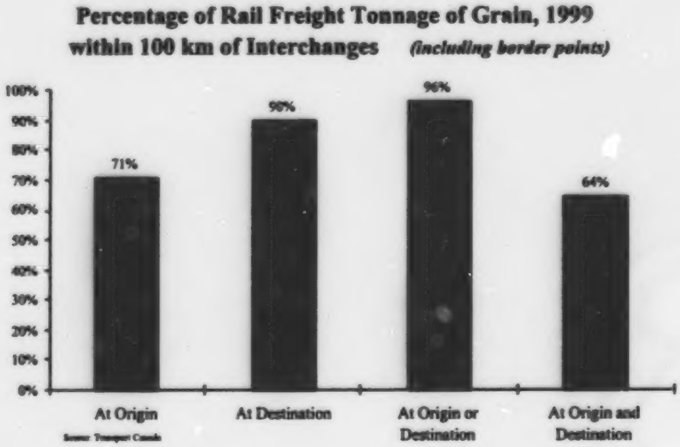
Source: Transport Canada

The percentage of grain traffic that both originates and terminates within the current interswitching limit is 24.2%, considerably less than the corresponding figure for total traffic. Comparing this graph with the previous one, it can be seen that this percentage is less for grain than for total traffic because of the smaller percentage of originating traffic that is within current interswitching limits.

For grain producers and elevator operators responding to the Panel's survey, (six companies responding), 97% of facilities were reported to have access to a single railway, and 14% of these were within interswitching limits. Thus, for these companies, 17% of their facilities had access to more than one railway or were within interswitching limits. This is comparable to the earlier estimate that 26.7% of originating traffic volumes are within interswitching limits.

A second analysis was undertaken using other distances from interchange points. If 50 kilometres were used as the interswitching limit instead of 30 kilometres, the tonnage of grain with access to another railway at origin would increase to 40.5% from 26.7%. If 100 kilometres were used, 71% of originating grain traffic would have access. Compared with 24.2% of grain traffic that originates and terminates within 30 kilometres of interchanges, 64% was within 100 kilometres of a competitive railway (see figure 5).

Figure 5



Intramodal Competition (Indirect)

A number of shippers who discussed competition with the Panel did not consider indirect competition a significant factor. Results from the Panel's survey were consistent with this view. Shippers using rail were asked whether their products could be trucked to the reload centres of other railways and, if so, to how many of their facilities this applied. Although 48% of shippers said at least one of their facilities was in this category, this applied to only 6% of all facilities of all respondents.

In addition, very few shippers indicated that they owned a facility or facilities on a different railway that enabled them to apply pressure in obtaining rates or service. Any

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impact of such competition on freight rates or level of service could not be identified in the survey.

Impact of Market Competition

The most obvious example of market competition is the shipment of metallurgical coal to the Japanese market, where Canadian coal competes with coal from Australia, Japan's main supplier. Changes in coal prices negotiated in the Japanese market can be reflected in changes in rail freight rates paid by coal producers.

Some shippers acknowledge their ability to partly offset reduced prices by negotiating new arrangements with railways.

Survey Results

The survey confirmed some presence of market competition but could not quantify the impact on rates or service. Shippers using rail were asked whether their products competed with those of producers from other countries or other regions using different railways and, if so, for how many of their facilities. The response was affirmative for 11% of all facilities. Although shippers that owned facilities subject to such market competition were more likely to report a decrease in rail rates over the last five years than the average of all rail shippers, the difference was not significant and could be attributed to other factors.

Shippers were also asked about geographic and product competition. They were asked whether they could use a different carrier by shipping to or from a different destination or by using a substitute product. A small number of rail shippers indicated that this was the case for some facilities.

Freight Rates and Commodity Export Prices

Another potential source of information on the extent and impact of market competition is the statistical relationship between changes in freight rates and changes in commodity export prices. For this purpose Transport Canada has compiled an index of export prices for each major commodity group and compared it with an index of revenue per tonne-kilometre (R/TK) for the same group, as an approximation of freight rates.[6]

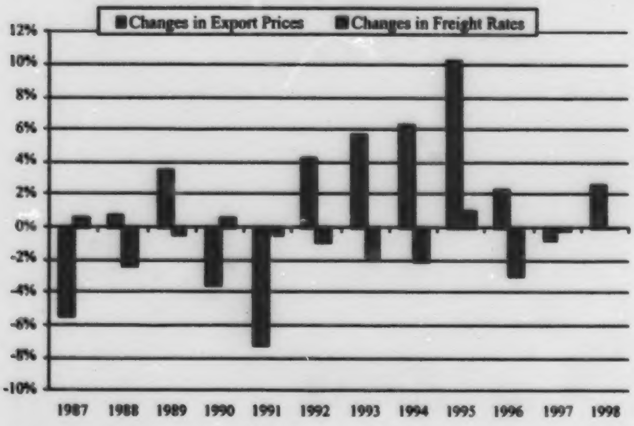
The commodity groups include grain, other agricultural products, forest products, non-ferrous metals, building materials, other bulk commodities, iron and steel, chemical and petroleum products, and a residual consisting of mostly finished products. Over the period 1987 through 1998, changes in export prices do not appear to have been a dominant factor influencing railway yields:

- Before 1991, there appears to have been some influence, especially for forest products and iron and steel.
- After the 1991 recession and through 1995, prices received by exporters recovered strongly while revenue per tonne-kilometre dropped.
- After 1995, there is again little to suggest a major influence of export prices, with the possible exception of forest products and iron and steel. In the case of grain, increases in rail prices coincided with significant decreases in export prices.

Figure 6 shows the relationship between freight rates and export prices at the aggregate level for all commodities. Again, there is no obvious relationship between export prices and rail rates. In particular, during the period of recovery and growth after 1991, rising export prices were boosted further for Canadian producers by the falling Canadian dollar and at the same time freight rates continued to drop.

Figure 6

Annual Changes in Rail Freight Rates and Export Prices
Total Traffic ($ current)



Source: Transport Canada

Notes

[1] Transport Canada, "The Potential for Modal Shifts: Contestable Surface Freight Traffic," November 1998. Data used by Transport Canada are for the year 1996 and cover the two major rail carriers and for-hire trucking carriers with more than $1 million in annual revenues.

[2] CN Perspectives on Competitive Rail Access Issues, October 6, 2000, p. 9.

[3] Transport Canada did such an analysis for trucking in the report cited in note 1.

[4] Transport Canada, "The Potential for Modal Shifts", p. 22.

[5] CN Perspectives, p. 9.

[6] Transport Canada, "Transportation in Canada, 1998". The methodology used for the export price indices was similar to that used to construct the R/TK or 'rail freight price' indices. The Tornqvist index method was applied to derive aggregate indices for commodity groups from weighted prices of individual commodities. The weights used for the export price indices were rail traffic volumes by commodity.

The Role of Differential Pricing: Implications and Remedies

One of the more contentious issues in the shipper-railway relationship is 'differential pricing', which refers to the practice of railways charging different percentage mark-ups over variable costs, depending on the responsiveness of shippers' demand for rail services to changes in freight rates. The result is that some users pay more than others for a given quantity of goods shipped over a given distance.

The Panel wanted to explore this issue fully, because a sound understanding of the role of differential pricing, its strengths and deficiencies helps point to the most effective approach to rail access legislation as a whole: a coherent policy framework that identifies targeted solutions and remedies for specific problems within a financially self-sustaining rail network.

The divergence of views before the Panel could hardly be more stark. Shippers that are especially dependent on rail – for the most part bulk commodity producers – assert that differential pricing results in their paying higher rates (and thus a greater contribution to railway fixed costs) so that others can pay less, an outcome they regard as unfair and abusive of market power.

The railways maintain that differential pricing is necessary to the recovery of total system costs and that its critics lack a full understanding of the practice. They contend that differential pricing is the only way for them to provide the optimal combination of service and price levels to all shippers across the range of markets, consistent with full cost recovery over the rail network as a whole.

Both shippers and railways made substantive arguments to the Panel setting out their views. Our review of what we heard highlighted several areas where proponents had either not considered thoroughly enough the implications of their views or had drawn incorrect conclusions from otherwise sensible observations.

From shippers the troublesome assertion is that the existence of what one submission termed "price discrimination" is prime facie evidence of a lack of competition and of monopolistic behaviour on the part of railways.[i] Differential pricing exists in many industries, including competitive ones (the differential pricing of varieties of beef in a grocery store is one example). Shipper advocates also do not make clear what the precise remedies would be, although they do explicitly link what they regard as the current lack of competition (captive shippers) with differential pricing. Most of the rail access proposals currently on the table have as one of their principal aims the provision of choice where none exists at present.

For the railways' part, the assertion that gives the Panel pause is that differential pricing requires no regulatory restriction at all. Railways state – citing economic theory – that differential pricing is the most efficient way to price services in a 'network' industry like railways, where distinct markets are served using shared facilities whose costs must also be shared one way or another through user fees. Any regulatory intrusion would, in their view, harm system efficiency (and ultimately shippers' welfare) and threaten railways' ability to generate income sufficient to maintain the rail infrastructure.

The Panel believes neither view is conducive to setting policies that will maintain an efficient and effective rail network.

The Panel rejects the argument made by some shippers that the existence of differential pricing is itself evidence of a lack of competition; differential pricing does exist in competitive industries. More significant from the Panel's perspective is that, for a network-type industry that is self-financing and not otherwise subsidized, differential pricing is the only practical way to proceed.

The theory underlying this assertion bears some explanation. Network industries like railways incur two kinds of costs: measurable costs directly assignable to a specific service (e.g., labour costs required to load or unload a particular shipment) and overhead or shared costs not traceable to any one service (e.g., maintenance for a section of track over which any number of shipments have passed). If these shared, constant costs are not recovered in sufficient measure from operating revenues, the firm cannot survive.

Notionally, one method of covering these costs would be to pro-rate them among all users uniformly, provided enough customers were willing and able to pay the mark-up on top of specific service costs. The difficulty with this apparently simple approach arises when potential rail traffic that is highly-price sensitive moves to a competing rail system or a different mode altogether rather than pay the mark-up, so the carrier loses the traffic overall.

Far better for the firm, and for the efficiency of the system (the more the traffic, the lower the constant cost per unit), that it charge a smaller proportion of constant costs to shippers that might move elsewhere or go out of business; a small contribution to constant costs is preferable to none at all. Balanced against the fact that other shippers are paying a higher proportion of constant costs is increased efficiency of the rail system as a whole, lower costs overall, and in some situations rail service where there would otherwise be none.

The Panel acknowledges the operational and economic challenges peculiar to railways. In these circumstances, differential pricing is appropriate and necessary. There is also a practical reason to accept the reality of differential pricing: the available alternatives all involve significant reversal of a decade and a half of policy measures and industry restructuring aimed at making the rail system financially self-sufficient, eliminating direct government involvement, increasing efficiency, raising the level of service and reducing costs to shippers.

Where critics of differential pricing fall short is that although they decry a practice they regard as objectionable, they do not offer a reasonable alternative. Absent the differential pricing mechanism, the practical choices are few: reinstating government subsidization of railways, so as to ensure sufficient capital investment, or reconstructing a regulatory regime to set freight rates and determine costs.

The railways' troubling prescription is that differential pricing should continue unfettered in any way. While broadly accepting the economic efficiency arguments for differential pricing, the Panel believes – and its policy recommendations reflect – that there are valid economic and public interest reasons for putting limits on its use. The economic arguments (presented in the accompanying box) are technical in nature; together, however, they encompass a significant reason why differential pricing in the context of Canadian shipping markets should not be unfettered.

The case for the public interest is the most compelling. As a country effectively founded on its citizens' ability to move products to distant locations, Canada is too varied, shipping markets too disparate, the history of rail too deep, and the social welfare issues too compelling for efficiency to be the only test. Surely the loss of some theoretical efficiency is warranted if the most extreme effects can be mitigated.

As is evident in our recommendations, the Panel's treatment of differential pricing mirrors our approach to rail access issues generally. The thrust of our recommendations is to encourage a regulatory regime that identifies instances that are 'insupportable' and provides mechanisms to mitigate extreme impacts. Our overriding aim is to build on the new-found vigour of the rail system, target the problems that persist, and avoid sweeping measures that will likely create more difficulties than they solve.

Possible Shortcomings of Ramsey Pricing in Practice

The Panel acknowledges the challenge facing railways, which differs from that facing shippers: a substantial portion of rail costs is shared in complex ways among different traffic, at different locations, under different conditions, at different times. We accept that differential pricing is appropriate and necessary under these conditions. The issue is whether there should be unbridled freedom for differential pricing until railways reach competitive rates of return. The railways and their advisers presented arguments in defence of differential or Ramsey pricing. We do not disagree with the theoretical arguments, but we believe that public interest considerations may call for limits on differential pricing, difficult as they may be to identify precisely.

The reasons are as follows:

1. the welfare foundations of rail differential pricing are not the same as those in the classic Ramsey argument;
2. there may be public interest grounds for deviating from efficient prices;
3. the cost structure is more complex than that presented in basic Ramsey models, and market power could distort the mark-ups;
4. the Ramsey model presumes that rail operations are as efficient as possible; and
5. there is the 'second best' problem that requiring full cost recovery for rail might not be optimal when we recognize that there is not full cost recovery on substitute modes.

The original Ramsey argument[ii] (as well as that enunciated by Boiteux in 1956[iii] and Baumol and Bradford in 1970[iv]) identifies the set of differential prices that minimize the welfare losses of prices deviating from identifiable marginal costs to cover a common revenue constraint (to cover all constant or overhead costs). The original Ramsey (and Boiteux) argument applied to final products, so that the willingness to pay indicated by the demand curves directly reflected consumer preferences. In practice, the railways face demand that is affected by the differential presence or absence of competitive alternatives.

High-valued products for consumers willing and able to bear high mark-ups might have competitive alternatives that limit the ability of railways to impose high mark-ups. By contrast, some shippers with lower intrinsic willingness (ability) to pay may have limited transport alternatives and can therefore bear higher charges than would be optimal if mark-ups reflected the underlying value of service to final consumers. The true Ramsey-type optimal taxes would be imposed on consumers of the products being carried by the railway, and these would not usually correspond to the mark-ups imposed by the railway. This is because the elasticities of demand perceived by railways are 'filtered' or modified by the extent or absence of transport competition.

This does not change the fact that from a railway's point of view, it is still true that unrestrained differential pricing will minimize the collective loss of traffic from raising prices to cover full costs. But the point to note is that there is not the underlying compelling argument that such a set of prices reflects consumer priorities; rather it is a mix of that and a differential mix of competition that modifies the elasticities of demand facing the railway. These market circumstances partly nullify the argument that Ramsey prices reflect the underlying valuation of alternatives by consumers.

Another point is that even in the pure Ramsey case, public interest considerations might reject the efficient pricing solution. A Ramsey-type sales tax might tax food and necessities higher than luxury goods, but society might well reject that tax structure on equity grounds.

In addition, the Ramsey argument assumes that costs are minimized, that production is as efficient as possible. We acknowledge the railways' efficient performance; they set the standard to measure performance for railways around the world. At the same time, no one believes there are no inefficiencies left to be removed, or that input prices are always as low as possible (one might compare wage rates in the rail sector with those in other industries and wonder whether there are some rents being captured in this highly unionized industry). The implication is that current measured rates of return may not be as profitable as they could be.

The Ramsey argument presents constant costs as a common pool of costs to be covered by all traffic. This is a useful characterization for demonstrating the underlying economic logic, but in fact there is a complex overlay of categories of costs associated with different traffic, different regions, etc. The real pricing problem is far more complex than portrayed in the basic Ramsey model. The implication is that mark-ups imposed on one sector or region subject to market power might be 'taxed' to cover overhead costs actually associated with other traffic or regions.

Of course, the cost allocation debates that can arise are legendary. But there is a basic principle that unrestrained differential pricing might not be appropriate in circumstances where some of the common overhead burden was not assignable to the traffic in question. We note here that the stand-alone cost (SAC) test would be a way to address this issue. The SAC is an estimate of the costs of a hypothetical efficient railway that might enter a market, including the ability to serve and obtain the mark-ups on any other traffic that could be served in conjunction with the particular shipper being priced.

Finally, the Ramsey argument assumes that it is appropriate to recover the full costs associated with the company or industry. Another dilemma and set of issues in transportation is that there is not full cost recovery across all modes of transport. If the road and rail sectors are substitutes, and if the road sector does not achieve full cost recovery, does it necessarily follow that one should try to achieve full cost recovery from rail? The simple second best answer is 'not necessarily', but there are other issues of who should bear the costs of any financial shortfall. Even if it were decided that there were to be some subsidy for rail users, should these financial costs be borne by rail shareholders or taxpayers generally. The issue of differential taxation and subsidy is a separate issue that has to be addressed elsewhere.

Notes

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[i] Medicine Hat Rail Services Group, p. 6.

[ii] Ramsey, F.P., "A Contribution to the Theory of Taxation" *Economic Journal* 37, 1927.

[iii] Boiteux, M. "Sur la gestion des monopoles publics astreints à l'équilibre budgétaire" *Econometrica* 24:1, 1956.

[iv] D.F. Bradford and W.J. Baumol, "Optimal Departures from Marginal Cost Pricing". *American Economic Review,* June 1970.

Note on Measurement and Behaviour of Rail Freight Rates

The Issues

The Panel asked the following question for consideration in its Interim Report:

> While much of the railways' productivity gains has been passed on to shippers, this may differ considerably among commodities and markets. Are there specific market sectors that have not benefited from railway productivity gains? (p. 12)

Revenue per tonne-kilometre (R/TK) has traditionally been used as an estimate of rail freight rates. Shipper interests raised concerns relating to the use of revenue per tonne-kilometre as a measure of freight rates. Their concerns are that R/TK is not a valid measure of freight rates and that, as an overall average, it is meaningless to those specific shippers, particularly rail-dependent bulk commodity producers, that may suffer from railway abuse of market power.[1]

Summary of Findings

Transport Canada Indices

Revenue per tonne-kilometre indices developed by Transport Canada indicate stable or falling freight rates on average across all major commodity groups except grain between 1988 and 1999. The Transport Canada indices are designed to avoid some of the statistical problems associated with the use of raw R/TK data as a measure of freight rates.

- The index for total traffic declined by 10% in nominal terms and 26% in real terms between 1988 and 1999. Raw R/TK data show the same result, suggesting there has been no significant change in overall traffic mix or length of haul.

- Between 1988 and 1999, the indices declined or were essentially stable for all commodity groups except grain (the only regulated commodity), with major declines occurring for chemical and petroleum products and iron and steel.

- There was a major decline in the index for 'other bulk' commodities (which includes coal, potash, iron ore and non-ferrous metal ores and concentrates) between 1995 and 1999, primarily because of coal.

- After declining by 7% from 1988 to 1995, the index for grain increased by 11% between 1995 and 1999. The increase reflects elimination of the grain costing reviews and application of an inflation adjustment. This result excludes any change that may be associated with the new revenue cap.

Survey of Shippers

Respondents to the Panel's survey of shippers – 47% of domestic carload users, 58% of transborder carload users, and 57% of intermodal users – indicated they experienced freight rate increases over the period 1995-2000.

This discrepancy between the survey results and the Transport Canada indices could be due to a number of factors. First, the sample was small. Second, the data covers slightly different time periods, the survey results reflect shipper experience in the year 2000, which the Transport Canada indices do not. Finally, it may be that a large number of small shippers are experiencing rate increases, but overall these are offset by declines in freight rates on larger volume movements.

Pass-through of Productivity Gains

The evidence shows that a substantial portion of railway total factor productivity gains of recent years has been passed on to shippers, about 40% between 1995 and 1999. Between 1988 and 1999, an estimated 75% of gains in total factor productivity were passed through to shippers. The considerable pass-through of productivity gains suggests the presence of substantial competition, overall, in rail markets.

Rail Freight Rates

Transport Canada Revenue Per Tonne-Kilometre Indices

Transport Canada has developed average revenue per tonne-kilometre indices for commodity groups, calculated from the R/TK of individual commodities making up the group and their revenue weights. The method used is described in Annex A, while the indices are shown in Annex B at the end of this document.

In brief, the indices remove statistical biases that can arise because of changes to the mix of commodities or length of haul. For example, if the volume of traffic increased sufficiently for a commodity such as coal, which has a relatively low R/TK, the overall average R/TK could decline as a result of this change in mix even if the R/TK for each commodity remained constant.

According to both measures (the raw unweighted R/TK and the Transport Canada index), overall average freight rates were 10% lower in 1999 than in 1988. When adjusted for inflation using the GDP deflator, they show a decline of 26% since 1988.

Transport Canada found significant differences by commodity groups. Figure 1 shows changes in average R/TK for different commodity groups. The base year 1988 was a peak year in the business cycle and corresponds to the passage of the *National Transportation Act, 1987*, which introduced the regime of confidential contracts in the setting of freight rates. The period 1995-99 covers the period of the *Canada Transportation Act* for which data are available.

Figure 1

Commodity Group	**% Change in Transport Canada R/TK Index**		
	1988-95	**1995-99**	**1988-99**
Grain	-7	11	4
Other agriculture	-4	2	-3
Forest products (primary & secondary)	-7	2	-5
Other bulk (e.g., copper/nickel ores/concentrates, coal)	0	-24	-24
Chemicals & petroleum products	-7	-11	-17
Building materials (e.g., stone, sand, cement, gypsum)	-2	-3	-5
Iron & steel	-12	-2	-14
Non-ferrous metals	2	0	2
Residual (intermodal, automotive, other manufacturing)	11	-11	-1
Total, all commodities	-4	-7	-10

Source: Transport Canada

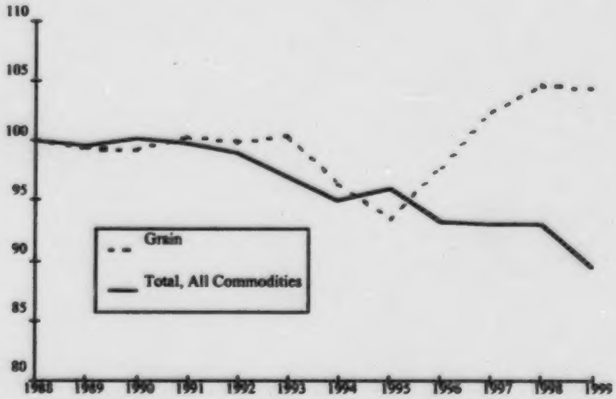
Over the entire period, the indices declined or were stable for all commodity groups except grain. There were significant drops for chemical and petroleum products and iron and steel. There was a major decline in the period 1995-99 for the 'other bulk' category, mainly because of coal.

These are aggregate changes. For example, the 'other agriculture' group includes about 90 separate commodities ranging from meat and vegetables to livestock, feeds and peat moss; 'forest products' covers everything from logs to paper products; and the 'residual' category includes more than 50 different products, mostly finished, including automotive and intermodal.

The index for grain is shown in figure 2, along with that for all commodities. The divergence of the index for grain from the average across all commodities since 1995 is apparent. Over the entire period, R/TK for grain increased by 4%. There was an 11% increase over the period 1995-99. The results exclude any change that may be associated with the new revenue cap.

Figure 2

Transport Canada Indices of Railway R/TK for Grains and all other Commodities
1988 = 100 ($current)



A key factor explaining changes in the R/TK index for grains (including oilseeds) is the regulation of freight rates for export grain over the period. The costing review by the Canadian Transportation Agency in 1994 is reflected in the decreases of 1994 and 1995. The CTA's elimination of costing reviews and the gearing of rates to inflation is reflected in increases after 1995.

Survey Results

Shippers responding to the Panel's survey were asked in early 2001 to indicate how their unit costs in 2000 for rail freight transportation (carload and intermodal, domestic and transborder) had changed since 1995 for comparable services.

Among the 120 shippers reporting use of rail, 94 reported using carload and 60 used intermodal rail services. The question on rates was answered by 61% of domestic carload users and 70% of transborder carload users, 62% and 45% for intermodal domestic and transborder respectively.

Of those that responded to the question, 47% of domestic carload users and 58% of transborder carload users reported increased rates. About 57% of intermodal users reported increases. Results are shown in the figure 3.

Figure 3

Comparison Between 2000 and 1995 Rail Rates

	Increase	No Change	Decrease	No Response	Total
Intermodal					
Domestic	35%	10%	17%	38%	100%
Canada-US & Mexico	25%	13%	7%	55%	100%
Carload					
Domestic	29%	11%	22%	39%	100%
Canada-US & Mexico	41%	11%	18%	30%	100%

Domestic carload shippers that reported increased rates also reported that these increases were small, in the 1-10% range. With an 8.4% increase in the GDP deflator over that period, it is likely that there were few increases in real terms.

Results can be compiled by industry. For example, in the forest products sector, 31% of domestic carload shippers that responded to the question said they had had an increase in rates, while 46% reported a decrease. In contrast, 64% of such shippers in the heavy manufacturing sector (e.g., motor vehicles, steel) reported increases and 27% reported decreases. These results are based on small numbers, however.

The small sample size may have caused bias in the response. In addition, a large number of shippers did not respond to the question on rates, and their experience with rates may not mirror the experience of those that did respond. It is also possible that shippers were responding to the announcement in November 2000 by CPR of a tariff increase of 4% and a fuel surcharge of 3% to take effect in December 2000. CN had also indicated its intention to apply a fuel surcharge. Shippers may have anticipated the impact of these announcements, even though they might not have been reflected in contract rates paid at the time the survey was conducted.

Despite these limitations, the results are supported by other surveys. Similar overall results to a slightly different question were recorded in a 1999 survey, conducted by COMPAS Inc. for the Canadian Industrial Traffic Association. Shippers were asked whether their company was benefiting, in the form of lower rates, from cost efficiencies achieved by the railway industry. Among those responding, opinion was divided almost evenly between yes and no.[2]

Survey Results Compared With Transport Canada Indices

The survey results indicate that more than 50% of shippers faced increases in freight rates over the five years from 1995 to 2000. In contrast, over the period 1995-99, there was a total decrease of about 6.7% in the R/TK index, with year-to-year changes as shown in figure 4.

Figure 4

1996/95	1997/96	1998/97	1999/98
-2.9%	-0.2%	0.0%	-3.7%

A major contributor to the overall decrease was the 'other bulk' commodity group, in particular coal. In fact, for the three-year period after 1996, there were small plus and minus changes for all commodity groups except grain and 'other bulk'.

Other Evidence on Freight Rates

Freight Rate Index

An alternative approach to measuring changes in freight rates is to develop an index in the same way a producer or consumer price index is prepared. This is done in the U.S., where a Producer Price Index (PPI) for railroads is compiled by the Bureau of Labor Statistics. The PPI for Canada, compiled by Statistics Canada, does not include transportation services.

The PPI for railroads is one of many indices collected and fed into the construction of the overall PPI for the U.S. economy. As with other price indexes, the PPI for "railroads, line-haul operating" is based on a basket of services that is constant over time.

The index increased over the period 1980-1999, while R/TK declined; this has been cited by shipper interests as evidence of the failure of the R/TK measure.[3] On the other hand, there are limitations in the way the U.S. PPI measure is compiled:

- Tariff rates are included as well as contract rates, so that the index may neither reflect actual rates paid nor capture switches that occur from tariff to contract rates. Information on which types of rates are used is considered confidential and not provided. According to the Bureau, "The preferred price to be collected is the contract price". However, "problems may arise in trying to get true contract prices".[4]

- The basket includes intercity passenger transportation services. Although these account for only 4% of revenues, increased passenger fares in 1998 and 1999 contributed to an overall increase in the index, while prices for "non-trailer-on-flatcar" freight shipments fell.[5]

Railway Shipment Data

It may be that many small shippers have experienced freight rate increases, but overall these were offset by declines in freight rates on larger volume movements. A shift in mix of low-volume to large-volume shipments would further explain the overall decline in freight rates despite reports of rate increases by low-volume shippers. This could be determined by examining individual shipment records over time in the same commodity and origin/destination markets.

Sharing of Railway Productivity Gains

The following discussion, including figures 5, 6, and 7 are based on combined CN and CPR data, which was provided by Transport Canada (see figure 8).

The extent to which railway's productivity gains have been passed on to shippers can be determined by comparing productivity changes with changes in prices received for outputs and prices paid for inputs.[6] Total price performance (TPP) is defined as the ratio of input price index to output price index. The gap between TPP and the total factor productivity (TFP) index indicates the extent of productivity gains passed on to shippers.

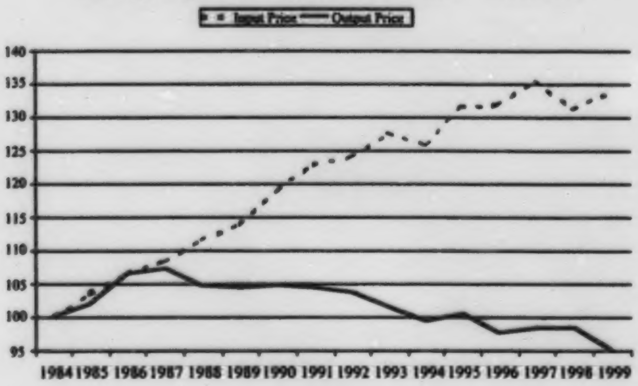
TPP tracks the rise in input prices paid relative to the prices received by railways for their outputs. If there were no productivity gains, output prices would have to rise, on average, to match the rise in input prices paid. Productivity enables firms to absorb the rise in input prices and not pass them on to customers. Tracking TPP relative to TFP shows both the increase in productivity and the extent to which productivity grains were passed on to shippers. The productivity pass-through is an overall average figure. The productivity improvement may differ among shippers; some might not improve at all, and some shippers may receive a larger proportion of the productivity gains.

Performance, 1988-1995 and 1995-1999

Figure 5 shows that during the 1988-1995 period, input prices increased on average by 2.4% per year. Output prices, measured by the same index of revenue per tonne-kilometre discussed earlier, declined over the period. This, combined with the increase in input prices, resulted in average annual growth in TPP of 3.0%. That is, the prices received by railways fell on average by 3.0% per year relative to the prices the railways paid for their inputs. This would result in serious financial losses unless there are productivity gains to offset the potential deterioration in revenues.

Figure 5

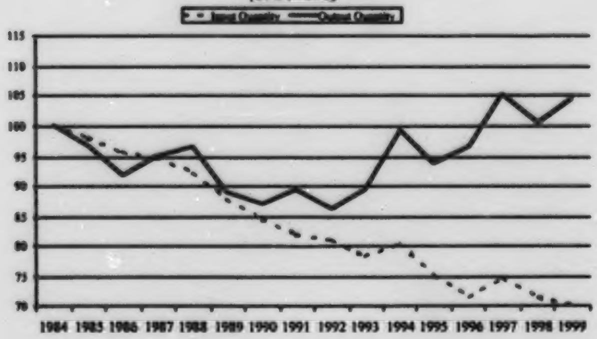
Railway Input & Output Price Indices *(1984=100)*



During the late 1980s and early 1990s, input quantities fell faster than output quantities (figure 6), so there was productivity growth but it was relatively slow. Productivity began to accelerate after 1992 as output grew after the recession. Nevertheless, TPP was increasing faster than TFP over the 1988-1995 period, and the railways were becoming financially weaker. Costs were increasing, and freight rates were not keeping pace.[7]

Figure 6

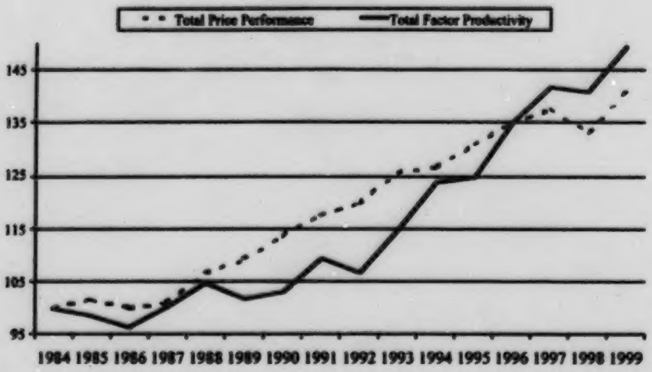
Railway Input & Output Quantity Indices
(1984=100)



From 1995 to 1999, input price increases slowed for the railways, increasing by just 0.4% a year. The downward trend continued in the quantity of inputs used, with the *Canada Transportation* Act of 1996 contributing to this trend by freeing railways to reduce inputs. At the same time, there was a rapid expansion of railway output during a period of major economic growth, so that average annual productivity gains of 4.6% were achieved (see figure 7).

Figure 7

Railway Productivity & Price Performance Indices
(1984=100)



Thus, after 1996, the TFP index exceeded the TPP index and contributed to the financial strength of the railways. Even though output prices (freight rates) continued to fall, unit costs fell even faster, and profitability increased.

Productivity Sharing

Between 1995 and 1999, the total increase in TFP was nearly 20%, while TPP increased by about 8%, suggesting that from 1995 railways were able to retain 60% of their productivity gains and pass on 40% to shippers.

For the total period 1988-1999, TFP increased by 43%, compared with an increase of 32% in TPP, indicating that about 25% of productivity gains could be retained by the railways and 75% passed on. Notice that before the mid-1990s, TPP exceeded TFP, and the railways were weakening financially; rail industry prices were falling faster than gains in productivity.

Figure 8

Combined CN and CPR Productivity Data

	Input Price	Output Price	Total Price Performance	Total Factor Productivity	Input Quantity	Output Quantity
1984	100.0	100.0	100.0	100.0	100.0	100.0
1985	103.5	101.8	101.6	98.6	98.0	96.6
1986	106.6	106.6	100.0	96.1	95.6	91.8
1987	108.3	107.2	101.0	100.3	94.8	95.1
1988	111.5	104.7	106.5	104.8	92.3	96.7
1989	113.8	104.3	109.2	101.4	87.8	89.0
1990	119.1	104.8	113.7	102.9	84.4	86.9
1991	122.8	104.4	117.6	109.1	81.8	89.2
1992	123.9	103.5	119.7	106.6	80.9	86.3
1993	127.5	101.5	125.6	114.6	78.2	89.6
1994	125.8	99.4	126.6	123.5	80.5	99.5
1995	131.5	100.4	131.0	124.8	75.1	93.8
1996	131.7	97.5	135.1	135.0	71.6	96.6
1997	135.4	98.4	137.6	141.6	74.5	105.5
1998	131.1	98.4	133.2	140.6	71.5	100.5
1999	133.8	95.0	140.8	149.4	70.0	104.6
Average annual % growth						
1988-95	2.4%	-0.6%	3.0%	2.5%	-2.9%	-0.4%
1995-99	0.4%	-1.4%	1.8%	4.6%	-1.8%	2.8%
Total % growth						
1988-95	17.9%	-4.1%	22.9%	19.1%	-18.6%	-3.0%
1995-99	1.7%	-5.4%	7.5%	19.7%	-6.8%	11.6%

Annex A
Transport Canada Freight Rate Index Methodology

A measure of the average price railways have charged for their services is freight revenue per tonne-kilometre (R/TK). As pointed out by shippers, this has limitations as a measure of average freight rates because it can be affected by a change in the mix or proportions between high-yielding and low-yielding traffic, by changes in length of haul and by other factors.

For example, if the volume of traffic increased sufficiently for a commodity such as coal, which has a relatively low R/TK, the overall average R/TK could decline as a result of this change in mix, even if the R/TK for each commodity remained constant.

The same problems can exist in the use of an average R/TK for a particular group of commodities, within which there can be different growth rates for individual commodities with higher or lower yields, as well as changes in length of haul.

To avoid these measurement problems, Transport Canada has developed and maintained rail price indices that take into account the relative importance of commodity mix and distance. These weighted indices are calculated using the Tornqvist method.[8]

For each commodity and time period, weights are calculated for the revenue that railways received for a commodity relative to total revenues, and the revenue that railways received from regional traffic relative to total revenues.

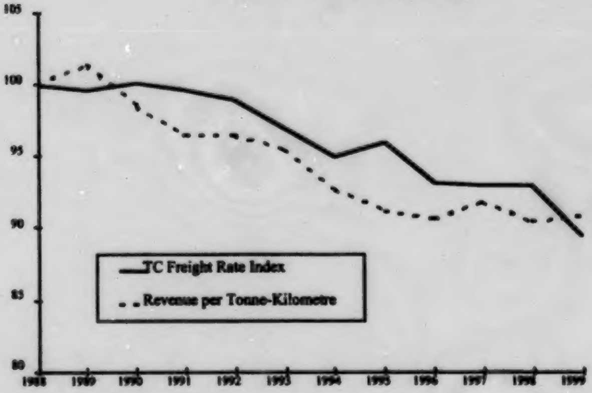
To determine the change in a price index from one year to another, the Tornqvist index uses an average of the weights for the two years. R/TK and weights were estimated for each of 320 commodities, as well as for major commodities groups, such as grains, forest products, and chemical and petroleum products. Canada was separated into five regions: Atlantic, Quebec, Ontario, Prairies and Pacific.

Transport Canada's weighted index generates similar results to the unweighted or raw index of R/TK. This is to be expected if there is no significant change in the mix of commodities carried by railways or in average length of haul.

Figure 9 compares the unweighted R/TK with the Transport Canada index for total traffic. According to both measures, overall average freight rates were 10% lower in 1999 than in 1988. These rates are nominal, i.e., not adjusted for inflation.

Figure 9

Average Railway Prices
1988 = 100 ($ current)



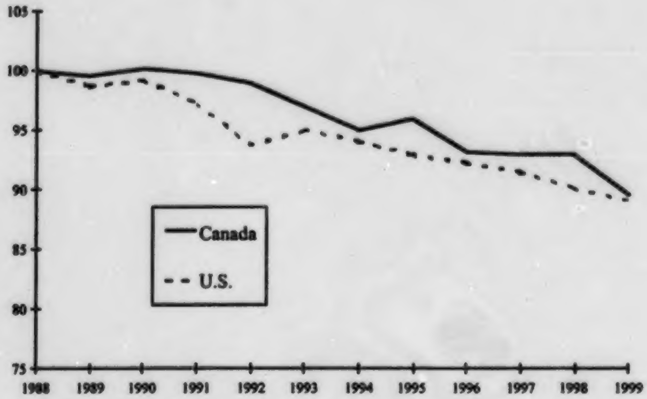
Source: Transport Canada.

When the two indices are adjusted for inflation using the GDP deflator, they show declines of 26% since 1988.

U.S. rail prices also declined by about 10% in nominal terms over the period 1988-1999 (figure 10). The Surface Transportation Board uses the same methodology as Transport Canada to calculate a weighted average rate. This is used to "investigate whether the declines in rates reported by AAR were real or simply a statistical illusion resulting from a shift toward low revenue per ton-mile traffic. Using a Tornqvist index…eliminates the bias induced by these types of changes in traffic mix".[9]

Figure 10

Canada and U.S. Rail Price Indices
1988 = 100 ($ current)



Sources: Transport Canada, Surface Transportation Board

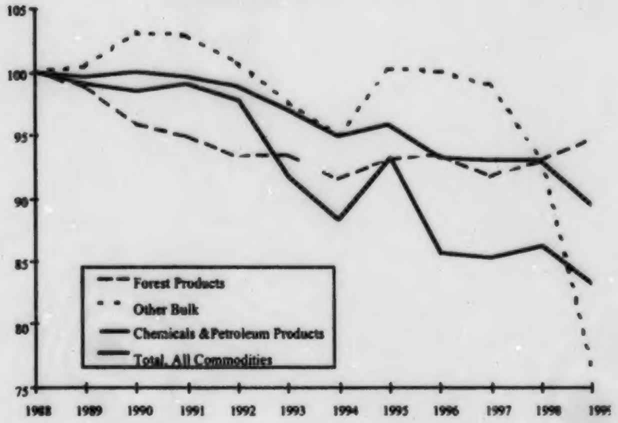
Annex B
Indices of Railway Prices

The following figures 11, 12, and 13 show changes in the railway price indices for various commodity groups in the 1988-1999 period.

Figure 11

Indices of Railway Prices for Forest Products, Other Bulk, Chemicals and Petroleum Products, and the Total for All Commodity Groups

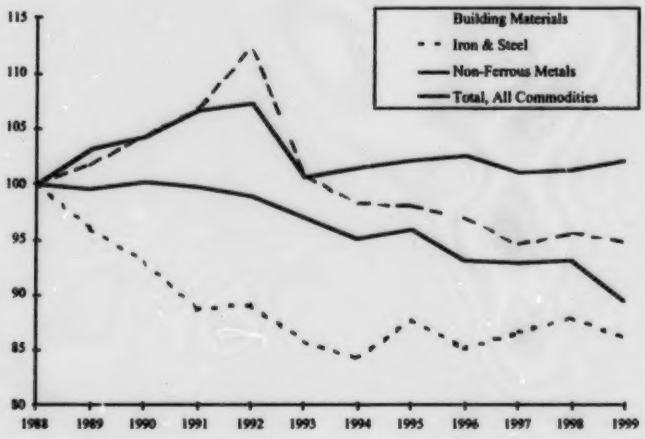
1988 = 100 ($ current)



Source: Transport Canada

Figure 12

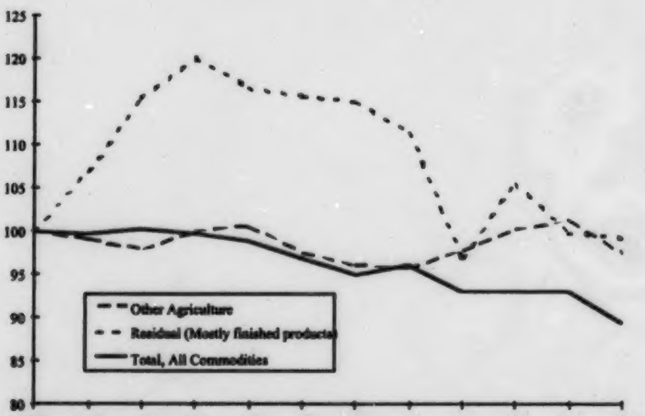
Indices of Railway Prices for Building Materials, Iron and Steel, Non-Ferrous Metals, and the Total for All Commodity Groups
1988 = 100 ($ current)



Source: Transport Canada

Figure 13

Indices of Railway Prices for Other Agriculture, Residual (mostly finished products), and the Total for All Commodity Groups
1988 = 100 ($ current)



Source: Transport Canada

Notes

[1] Harvey A. Levine, "A Response to the Interim Report: Competitive Rail Access Undertaken by Canada Transportation Act Review Panel", pp. 3-5.

[2] Canadian Transportation & Logistics, February 2000 (www.ctl.ca)

[3] Levine, "A Response to the Interim Report: Competitive Rail Access", p. 4.

[4] Bureau of Labor Statistics, "Industry Synopsis: SIC 4011 – Railroads, Line-Haul Operating", pp.13-14.

[5] BLS, Monthly Labor Review, August 2000, p. 22.

[6] W.G. Waters II and Michael W. Tretheway, "Comparing Total Factor Productivity and Price Performance", *Journal of Transport Economics and Policy* 33, Part 2, pp. 209-220.

[7] Waters and Tretheway, p. 218.

[8] Transport Canada, "Transportation in Canada", annual reports for 1996-2000. See also V. Wei, "Rail Price Indices, Canadian Class 1 Railways", Economic Analysis, Transport Canada, June 1992.

[9] U.S. Surface Transportation Board, Office of Economics, Environmental Analysis, and Administration, "Rail Rates Continue Multi-Year Decline", December 2000.

CANADA
TRANSPORTATION
ACT REVIEW

EXAMEN DE LA LOI
SUR LES TRANSPORTS
AU CANADA

Survey of Shippers

Questionnaire

| Plain Text Version | PDF Version |

Synopsis of Survey Results

| Plain Text Version | PDF Version |

Canada
Transportation
Act Review

Canada

Examen
de la Loi sur les
transports au Ca

PROTECTED WHEN COMPLETED

Survey of Shippers

for the
Canada Transportation Act Review

Questionnaire

This questionnaire can be found on the
***Canada Transportation Act* Review's web site at**
www.reviewcta-examenltc.gc.ca
Please complete it there, if possible.

Canada

Welcome to this Survey of Shippers for the *Canada Transportation Act* Review.

The information you provide here on your experience with the availability, use, cost and quality of transport services will assist in the review of the *Canada Transportation Act* (CTA).

Your completion of the survey would be greatly appreciated. We have received the support of a wide range of shipper associations, including the following:

- *Association of International Automobile Manufacturers of Canada*
- *Automotive Parts Manufacturers' Association*
- *Canadian Association of Importers and Exporters*
- *Canadian Chemical Producers' Association*
- *Canadian Fertilizer Institute*
- *Canadian Industrial Transportation Association*
- *Canadian National Millers' Association*
- *Canadian Petroleum Products Institute*
- *Canadian Plywood Association*
- *Canadian Produce Marketing Association*
- *Canadian Pulp and Paper Association*
- *Canadian Shippers' Council*
- *Coal Association of Canada*
- *Coast Forest and Lumber Association*
- *Council of Forest Industries*
- *Inland Terminal Association of Canada*
- *Interior Lumber Manufacturers' Association*
- *Mining Association of Canada*
- *Propane Gas Association of Canada Inc.*
- *Quebec Food Processors' Association*
- *Quebec Lumber Manufacturers' Association*
- *Quebec Produce Marketing Association*
- *Western Canadian Shippers' Coalition*
- *Western Grain Elevator Association*

Only aggregate information will be presented in any reports from the survey, with no identification of responses from individual companies. Confidential information will be protected in accordance with the provisions of the *Access to Information Act*.

If you have any questions concerning the survey, please contact:

Canada Transportation Act Review
P.O. Box 1118, Station B
Ottawa, Ontario K1P 5R2

Phone: (613) 993-4743
Fax (613) 993-7837
E-mail: survey@reviewcta-examenltc.gc.ca

For information on the Review, please visit our Web site at www.reviewcta-examenltc.gc.ca

Please complete Section 1 .... then the Rail, Trucking, Marine and Air Freight sections only if they apply to your company's transportation activities.

Section 1 - General

Name ( ) Mr ( ) Mrs ( ) Ms		**Title**
Company Name		
Address		
City	**Province/Territory**	**Postal Code**
Telephone ( )		**FAX ( )**
E-Mail		

1.1 How many employees are in your company's Canadian operations?

("Dk/Na" is used throughout the survey for "don't know" or "not applicable")

___ 1-49 ___ 50-99 ___ 100-199 ___ 200-499 ___ 500-999 ___ 1,000-9,999 ___ 10,000+ ___ Dk/Na

1.2 Which are the industries to which your company belongs? ***(Check all that apply)***

- ___ Agriculture and related services
- ___ Mining, quarrying and oil well
- ___ Food products
- ___ Beverage
- ___ Rubber products
- ___ Plastic Products
- ___ Leather and allied products
- ___ Primary textile and textile products
- ___ Clothing products
- ___ Wood
- ___ Furniture and fixtures
- ___ Paper and allied products
- ___ Printing, publishing and allied industries
- ___ Primary metals
- ___ Fabricated metal products
- ___ Machinery
- ___ Transportation equipment
- ___ Electrical and electronic products
- ___ Non-metallic mineral products
- ___ Refined petroleum and coal products
- ___ Chemical and chemical products
- ___ Wholesale trade
- ___ Retail trade
- ___ Other Specify: _______________

1.3 Please indicate the number of production, distribution and/or retail facilities your company operated during 2000:

Location	Number
Newfoundland	
Prince Edward Island	
Nova Scotia	
New Brunswick	
Quebec	
Ontario	
Manitoba	
Saskatchewan	

Location	Number
Alberta	
British Columbia	
Yukon	
Northwest Territories	
Nunavut	
U.S.A	
Mexico	
Other Countries	

1.4 For your company's traffic volume in 2000, please indicate the transportation services* used and their percentage of your total traffic:

(Total entries in this table sum to 100%)

Transport Services	Used	Not used	Dk / Na	1-10 %	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91-100 %
Rail Intermodal													
Rail Carload													
Truckload (TL)													
Less-than- truckload (LTL)													
Courier/Small Parcel Express													
Marine Containerized													
Marine Other General Cargo													
Marine Bulk Cargo													
Air Freight													
Other: (Specify: ____________)													

* Definitions can be found at the end of the questionnaire.

1.5 How has your company's use of transportation services changed since 1995 by mode? Please indicate changes (if any) and the extent of such changes:

Transport Services	Increase	Decrease	No change	Dk / Na	1-10%	11-20%	21-30%	31-50%	51-100%	More than 100%
Rail Intermodal										
Rail Carload										
Truckload (TL)										
Less-than-Truckload (LTL)										
Courier/Small Parcel Express										
Marine Containerized										
Marine Other General Cargo										
Marine Bulk Cargo										
Air Freight										

1.6 Please indicate your company's annual freight bill for purchased transportation in total and for each of the modal services that you use:

	Less than $200,000	$200,000 - $999,999	$1,000,000-$9,999,999	$10,000,000-$99,999,999	$100,000,000 +
Total Freight Bill					
Rail Intermodal					
Rail Carload					
Truckload (TL)					
Less-than-Truckload (LTL)					
Courier/Small Parcel Express					
Marine Containerized					
Marine Other General Cargo					
Marine Bulk Cargo					
Air Freight					

1.7 Please indicate the approximate percentage of shipments by market for each mode used in 2000 (e.g. your trucking shipments could be 60% domestic and 40% Canada-U.S.)

Transport Services	Domestic	Canada-U.S.	Canada-Mexico	Other International	Total
Rail Intermodal	_____%	_____%	_____%	_____%	100%
Rail Carload	_____%	_____%	_____%	_____%	100%
Truckload (TL)	_____%	_____%	_____%	_____%	100%
Less-than-Truckload (LTL)	_____%	_____%	_____%	_____%	100%
Courier/Small Parcel Express	_____%	_____%	_____%	_____%	100%
Marine Containerized	_____%	_____%	_____%	_____%	100%
Marine Other General Cargo	_____%	_____%	_____%	_____%	100%
Marine Bulk Cargo	_____%	_____%	_____%	_____%	100%
Air Freight	_____%	_____%	_____%	_____%	100%

1.8 How were your company's 2000 transportation arrangements made? Please provide your best estimate of the percentage of shipments by market.

	Dealt with carriers directly	Arrangements made through intermediaries	Total	Dk / Na
Domestic	_____%	_____%	100%	
Canada- U.S	_____%	_____%	100%	
Canada-Mexico	_____%	_____%	100%	
Other International	_____%	_____%	100%	

1.9 How have your company's total freight volumes changed since 1995? Please indicate, by market, changes (if any) and the extent of such changes using the percentage ranges specified:

	Increase	Decrease	No Change	Dk / Na	1-10%	11-20%	21-30%	31-50%	51-100%	More than 100%
Domestic										
Canada-U.S.										
Canada-Mexico										
Other International										

1.10 Has your company changed its choice of transportation mode for any of its traffic since 1995 and, if so, what was the main reason for the shift?

Type of Modal Shift	Modal Shift			Main Reason for Modal Shift			
	Yes	No	Dk / Na	Changes in Market Conditions	Price/ Rate	Terms and Conditions (excl. rates)	Other (Specify)
Truck to Rail Carload							
Truck to Rail TOFC*							
Truck to Rail COFC*							
Rail Carload to Truck							
Rail TOFC to Truck							
Rail COFC to Truck							
Rail to Marine							
Marine to Rail							
Truckload to LTL							
TL/LTL to Courier/Small Parcel							
Other: ____________							

* TOFC = Trailer on flat car; COFC = Container on flat car.

1.11 Please indicate your company's use of electronic commerce: *(Check all that apply)*

Type of Business Transaction	Type of Technology Used or Planned						Enables your firm to implement new distribution strategies?	
	Electronic Data Interchange (EDI)			Internet				
	Use Now	Planned	Dk / Na	Use Now	Planned	Dk / Na	Yes	No
• with product and material suppliers								
• with transportation service providers								
• within your company								
• with business customers								
• with final consumers								
• with government								

1.12 The transportation service providers involved in your electronic commerce (used or planned) are in which modes?

(Check all that apply)

___ rail ___ trucking ___ courier / small parcel express ___ marine ___ air

1.13 Does your company use the following to meet its transportation requirements?

	Yes?	No?	Planning to?	Investigating?	Dk / Na
Third party logistics company					
Rail					
Trucking					
Courier / Small Parcel Express					
Marine					
Air					
Transportation or freight exchange					
Rail					
Trucking					
Courier / Small Parcel Express					
Marine					
Air					

Section 2 - Rail Transportation Services

If you indicated the use of rail intermodal or rail carload transportation services in Question 1.4, please complete all applicable questions in this section. If your company does not use rail freight services, go to Question 3.1

2.1 Please complete for each province or for territories:

Province/ Territories	**1 Indicate the number of your production, distribution or retail facilities which have direct access to rail**	**2 Indicate the number of your facilities with direct access to the mainlines of Canada's two major railways**	**3 Of the number in Column 1, how many have direct access to the lines of a single railway only?**	**4 Of the number in column 3, how many are within 30 km of an interchange with competing railway(s)?**
Nova Scotia				
New Brunswick				
Québec				
Ontario				
Manitoba				
Saskatchewan				
Alberta				
British Columbia				
Territories				

2.2 In your negotiations with Canadian railways over the last 5 years, please indicate if you used the possibility of interswitching as a bargaining tool:

_____ Yes _____ No _____ No negotiations over last 5 years

2.3 If your company had cars interswitched in 2000, please indicate how many cars were interswitched in each province:

	N.S.	**N.B.**	**Que.**	**Ont.**	**Man.**	**Sask.**	**Alta.**	**B.C.**
No. of cars								

2.4 How has overall Canadian railway service to your company changed over the last 5 years (ie. since 1995?

__ Major improvement __ Minor improvement __ No change __ Minor deterioration __ Major deterioration

2.5 Please rate the following service factors as they applied to Canadian rail carriers serving your company:

Service Factors	In 2000		Changes over the last five years				
	Satisfactory	Unsatis-factory	Major improvement	Minor improvement	No change	Minor deterioration	Major deterioration
Equipment Supply							
Service Frequency							
Service Reliability							
Transit Time							
Claims Handling							
Shipment Tracing							
Ability to perform transactions over the internet							
Switching Services							
Product Care / Cargo Handling							
Overall Service Quality							
Equipment Supply							
Service Frequency							
Service Reliability							
Transit Time							
Claims Handling							
Shipment Tracing							
Ability to perform transactions over the internet							
Switching Services							
Product Care / Cargo Handling							
Overall Service Quality							

2.6 How did your unit freight costs on Canadian railways in 2000 compare with 1995, for comparable routes and services?

	Increased	Decreased	No Change	% of Increase/Decrease		
				0-10%	11-20%	21% +
Rail Intermodal						
Domestic						
Canada-U.S. & Mexico						
Rail Carload						
Domestic						
Canada-U.S. & Mexico						

2.7 Were the above changes influenced by a fuel surcharge? If so, how many percentage points did it account for?

	Domestic	Canada-U.S. and Mexico
Rail Intermodal	__________ percentage points	__________ percentage points
Rail Carload	__________ percentage points	__________ percentage points

2.8 If you were in negotiations with Canadian railways over the last 5 years, please indicate if you used the possibility of a Competitive Line Rate (CLR) as a bargaining tool in your negotiations.

_____ Yes _____ No _____ No negotiations over last 5 years

2.9 Between 1995 and 2000, did your company undertake negotiations with connecting railways with the objective of having a CLR established with a local railway?

_____ Yes _____ No

2.10 If "yes", was (were) the connecting carrier(s):

_____ Canadian carriers _____ U.S. carriers

2.11 Please rank in order from 1 to 9 ("1" being the most important), each of the following factors with regard to their importance in achieving terms and conditions (including rates) for rail services which you consider competitive. *(Leave blank if not relevant.)*

	Rank		**Rank**
Access to other modes of transportation		Joint Rates	
Access to more than one railway		Joint Track Usage	
Competitive Line Rates (CLRs)		Existence of other Act provisions (eg. Final offer arbitration, mediation, public investigations)	
Confidential Contracts		Other: (Specify: ____________________)	
Interswitching			

2.12 Please indicate if the following statements are true for any of your facilities which use rail freight:

	Yes	**No**	**If yes, for how many of your facilities is it true?**
Shipping by truck or other mode is a viable option			
Products can be trucked to reload centres of other railways			
Products compete with those of producers from other countries or other regions using different railways			
A different carrier could be used by shipping to or from a different destination or by using a substitute product			
Your company owns a facility or facilities on a different railway which enables you to apply pressure in obtaining rates or service.			

2.13 Please assess the willingness of rail carriers to compete with each other for your traffic, if relevant.

	In 2000					Over the last five years		
	Very interested	**Interested**	**Indifferent**	**Not interested**	**Dk / Na**	**More interested**	**Just as interested**	**Less interested**
Canadian Carriers								
U.S. Carriers								

2.14 Does volume make a difference to the willingness of rail carriers to compete with each other for your traffic?

___ Yes ___ No ___ Dk / Na

2.15 What proportion of your company's traffic shipped on Canadian railways originated or terminated on short line railways in 2000?

______ %

2.16 What specific aspects of rail legislation covered by the *Canada Transportation Act* should be changed (if any) and why?

____

____

____

____

____

____

Section 3 - Trucking Services

If you indicated the use of truckload, less-than-truckload, courier/small parcel express services in Question 1.4, please complete all applicable questions in this section.

If your company does not use trucking services, go to Question 4.1

3.1 Please indicate how your company arranged for the trucking services and carriers used in 2000, by type of service.

(Check all that apply)

	Type of arrangement				
	Used own fleet to move own goods	**Dealt with carrier directly**	**Made arrangements through an intermediary - and KNOW which carrier was used**	**Made arrangements through an intermediary - and DO NOT KNOW which carrier was used**	**Dk / Na**
Truckload					
Local/Intra-Provincial					
Extra-Provincial Domestic					
Canada-U.S. & Mexico					
Less-Than-Truckload					
Local/Intra-Provincial					
Extra-Provincial Domestic					
Canada-U.S. & Mexico					
Courier/Small Parcel					
Local/Intra-Provincial					
Extra-Provincial Domestic					
Canada-U.S. & Mexico					

3.2 If your company has moved freight between Canada and the U.S. or Mexico over the last 5 years and did not use your own fleet, did your company shift traffic:

from a Canadian-based carrier to a U.S.-based carrier? ____ No ____ Yes ____ Don't know

from a U.S.- based carrier to a Canadian-based carrier? ____ No ____ Yes ____ Don't know

3.3 If you answered "yes" to either part of question 3.2, how did this affect the distribution of your company's transborder truck traffic over the last 5 years?

Traffic to/from U.S. & Mexico carried by:	**Increased since 1995**	**Decreased since 1995**
Canadian-based Carriers		
U.S.-based Carriers		

3.4 What percentage of your 2000 truck traffic moved on equipment owned/leased by your company?

___ **None** ___ **1-10%** __ __ **11-20%** ___ **21-40%** ___ **41-60%** ___ **61-80%** ___ **81-100%**

3.5 If your company operated a private fleet of trucks in 2000, how did the use of this fleet compare to 1995?

___ **Greater** ___ **Less** ___ **No change**

3.6 How has the quality of overall Canadian for-hire truck services to your company changed over the last 5 years (ie. since 1995)?

__ **Major improvement** __ **Minor improvement** __ **No change** __ **Minor deterioration** __ **Major deterioration**

3.7 Please rate for-hire truck carriers serving your company on the following service factors:

Service Factors	In 2000		Changes over the last five years				
	Satisfactory	Unsatisfactory	Major improvement	Minor improvement	No change	Minor deterioration	Major deterioration
[illegible]							
Equipment Supply							
Service Frequency							
Service Reliability							
Transit Time							
Claims Handling							
Ability to perform transactions over the internet							
Shipment Tracing							
Product Care/Cargo Handling							
Overall Service Quality							
[illegible]							
Equipment Supply							
Service Frequency							
Service Reliability							
Transit Time							
Ability to perform transactions over the internet							
Claims Handling							
Shipment Tracing							
Product Care/Cargo Handling							
Overall Service Quality							
[illegible]							
Equipment Supply							
Service Frequency							
Service Reliability							
Transit Time							
Ability to perform transactions over the internet							
Claims Handling							
Shipment Tracing							
Product Care/Cargo Handling							
Overall Service Quality							

3.8 How did your unit freight costs in 2000 compare with 1995, for comparable routes and services?

	Increased	Decreased	No Change	% of Increase/Decrease		
				0-10%	11-20%	21% +
Truckload						
Extra-Provincial Domestic						
Canada-U.S. & Mexico						
Less-Than-Truckload						
Extra-Provincial Domestic						
Canada-U.S. & Mexico						
Courier/Small Parcel						
Extra-Provincial Domestic						
Canada-U.S. & Mexico						

3.9 Were the above changes influenced by a fuel surcharge? If so, how many percentage points did it account for?

	Domestic	Canada-U.S. and Mexico
Truckload	________ percentage points	________ percentage points
Less-Than-Truckload	________ percentage points	________ percentage points
Courier/Small Parcel	________ percentage points	________ percentage points

3.10 What specific aspects of motor carrier legislation should be changed (if any) and why?

____

____

____

____

____

Section 4 - Marine Transportation Services

If you indicated the use of marine containerized, other general cargo or bulk services in Question 1.4, please complete all applicable questions in this section.

If your company does not use marine services, go to Question 5.1

4.1 For the waterborne traffic controlled by your company in 2000, please indicate to whom it was assigned:

	Inter-mediaries	Conference shipping lines	Non-conference/ independent lines	Company's vessels (owned or leased)	Charter operators	Other (Specify) ______	Dk/ Na
[illegible]							
Domestic							
Canada - U.S.							
Other International - Export							
Other International - Import							
[illegible]							
Domestic							
Canada - U.S.							
Other International - Export							
Other International - Import							
[illegible]							
Domestic							
Canada - U.S.							
Other International - Export							
Other International - Import							

4.2 Please assess the willingness of marine carriers to compete with each other for your traffic, if relevant.

Traffic	In 2000					Over the last five years		
	Very interested	Interested	Indiff-erent	Not interested	Dk / Na	More Interested	Just as interested	Less interested
Domestic								
Canada - U.S.								
Other International - Export								
Other International - Import								

4.3 Rate the quality of marine service provided to your company in the movement of cargo in 2000:

Service Factors	In 2000		Changes over the last five years				
	Satisfactory	Unsatis-factory	Major improvement	Minor improvement	No change	Minor deterioration	Major deterioration
[illegible]							
Equipment Supply							
Frequency of Sailings							
Service Reliability							
Transit Time							
Space Availability							
Shipment Tracing							
Ability to perform transactions over the internet							
Product Care/Cargo Handling							
Overall Quality of Service							
[illegible]							
Equipment Supply							
Frequency of Sailings							
Service Reliability							
Transit Time							
Space Availability							
Shipment Tracing							
Ability to perform transactions over the internet							
Product Care/Cargo Handling							
Overall Quality of Service							
[illegible]							
Equipment Supply							
Service Reliability							
Transit Time							
Ability to perform transactions over the internet							
Product Care/Cargo Handling							
Overall Quality of Service							

4.4 How did your marine general cargo freight rates in 2000 compare to those in 1995, for comparable routes and services?

	Increased	Decreased	No Change	% of Increase/Decrease		
				0-10%	11-20%	21% +
Domestic						
Canada-U.S.						
Other International - Export						
Other International - Import						

4.5 Were the above changes influenced by a fuel surcharge? If so, how many percentage points did it account for?

Domestic	Canada-U.S.	Other International - Exports	Other International - Imports
_____ percentage points	_____ percentage points	_____ percentage points	_____ percentage points

4.6 Approximately what proportion of your company's overseas waterborne tonnage/volume in 2000 moved under ocean service contracts negotiated with conferences serving Canada and filed with the Canada Transportation Agency?

Exports ___ 0% ___ 1-20% ___ 21-40% ___ 41-60% ___ 61-80% ___ 81-100%

Imports ___ 0% ___ 1-20% ___ 21-40% ___ 41-60% ___ 61-80% ___ 81-100%

4.7 Approximately what proportion of your company's overseas waterborne tonnage/volume moved under Independent Action (I/A) taken by (a) member line(s) of a shipping conference serving Canada?

Exports ___ 0% ___ 1-20% ___ 21-40% ___ 41-60% ___ 61-80% ___ 81-100%

Imports ___ 0% ___ 1-20% ___ 21-40% ___ 41-60% ___ 61-80% ___ 81-100%

4.8 Please rate the effect that the ***Shipping Conferences Exemption Act (SCEA)*** and its provisions have had in 2000 in creating conditions in liner shipping which have enhanced your company's ability to compete internationally:

	Beneficial	**No Known Effect**	**Detrimental**
SCEA in general			
Service Contracts			
Independent Action (I/A)			
Stipulation of notice period for tariff and surcharge changes			
Complaint Resolution Mechanism			

4.9 What specific aspects of the *SCEA* should be changed (if any) and why?

Section 5 - Air Freight Transportation Services

If you indicated the use of air freight services in Question 1.4, please complete all applicable questions in this section.

If your company does not use air freight services, go to Question 6.1

5.1 Please indicate the type(s) of air cargo services used by your company in 2000:

	Scheduled all-cargo services	**Charter all-cargo services**	**Cargo capacity on scheduled passenger services (belly and upperdeck)**	**Cargo capacity on charter passenger services (belly and upperdeck)**
Domestic				
Canada-U.S.				
Other International				

5.2 How did your air cargo freight costs in 2000 compare with 1995, for comparable routes and services?

	Increased	**Decreased**	**No Change**	**% of Increase/Decrease**		
				0-10%	**11-20%**	**21% +**
Domestic						
Canada-U.S.						
Other International						

5.3 Were the above changes influenced by a fuel surcharge? If so, how many percentage points did it account for?

Domestic	**Canada-U.S.**	**Other International**
_________ percentage points	_________ percentage points	_________ percentage points

5.4 Please rate the quality of air cargo services used by your company in 2000:

Service Factors	In 2000		Changes over the last five years				
	Satisfactory	Unsatisfactory	Major improvement	Minor improvement	No change	Minor deterioration	Major deterioration
Domestic							
Air Capacity Available							
Frequency of Service							
Number of Carriers Serving your Market							
Service Reliability							
Transit Time							
Ability to perform transactions over the internet							
Product Care/Cargo Handling							
Shipment Tracing							
Liability Coverage							
Overall Service Quality							
Canada-U.S.							
Air Capacity Available							
Frequency of Service							
Number of Carriers Serving your Market							
Service Reliability							
Transit Time							
Ability to perform transactions over the internet							
Product Care/Cargo Handling							
Shipment Tracing							
Liability Coverage							
Overall Service Quality							

5.4 Continued

Service Factors	In 2000		Changes over the last five years				
	Satisfactory	Unsatis-factory	Major improvement	Minor improvement	No change	Minor deterioration	Major deterioration
Other International							
Air Capacity Available							
Frequency of Service							
Number of Carriers Serving your Market							
Service Reliability							
Transit Time							
Ability to perform transactions over the internet							
Product Care/Cargo Handling							
Shipment Tracing							
Liability Coverage							
Overall Service Quality							

5.5 Did your company move any of its domestic air cargo traffic in 2000 under the terms and conditions of confidential contracts with Canadian air carriers?

____ Yes ____ No

5.6 What proportion of your company's domestic air cargo traffic shipped with Canadian air carriers in 2000 moved under confidential contracts?

____ %

5.7 How did this compare to the proportion of your domestic air cargo moved under confidential contracts with Canadian carriers in 1995?

_____ **Greater** _____ **Same** _____ **Smaller** _____ **Not applicable**

5.8 How did your 2000 confidential contract air cargo rates compare to the 1995 ones?

_____ **Higher** _____ **Same** _____ **Lower** _____ **Not applicable**

5.9 What specific aspects of Canadian legislation covering domestic air freight should be changed (if any) and why?

____

____

____

____

____

____

Section 6 - Additional comments

6.1 **Do you have any additional comments on any of the questions or other points of interest?**

(Please list the mode of transport (if applicable) before each comment)

Thank you for taking the time to complete this survey.

Please return to:

Canada Transportation Act Review
P.O. Box 1118, Station B
Ottawa, Ontario K1P 5R2

Fax (613) 993-7837

E-mail: survey@reviewcta-examenltc.gc.ca

GLOSSARY

COFC	Container on flat car
Competitive Line Rate (CLR)	A shipper located on one rail line and beyond interswitching limits can ask its local railway to establish a Competitive Line Rate (CLR) for moving goods to a competing railway line. The CLR applies from the point of origin or destination to the nearest interchange with that competing railway.
Conference shipping lines	Liner shipping companies offering agreed freight rates and/or conditions of service between designated ports. Among the major lines serving Canada as conference members are Atlantic Container Line, Canada Maritime Ltd., Hapag-Lloyd Container Line, P&O Nedlloyd Ltd., Mitsui O.S.K. Lines and the Orient Overseas Container Line.
Courier/Small Parcel Express	Specialized services for delivery of envelopes and small packages, often requiring a combination of services such as intercity bus, air cargo and less-than-truckload. Major carriers include Canada Post, Canpar, Federal Express, Loomis, Purolator, RPS, TNT Express Worldwide and United Parcel Service.
Freight	Any of a company's inputs or outputs which require transportation to and/or from the company's Canadian production, distribution and/or retail facilities.
Independent Action (I/A)	The act by a member line of a conference of setting a tariff provision for a rate or service item different from the conference's existing standard tariff or service provisions. I/A rates are usually lower than the standard conference rates.
Intermediaries	Includes, among others, freight forwarders, freight brokers, intermodal marketing companies, logistics companies, load consolidators and non-vessel operating common carriers (NVOCCs).
Interswitching	Transfer of traffic from the lines of one railway company to those of another railway company within a 30 km limit.
Less-Than-Truckload (LTL)	Trucking services carrying shipments weighing less than 10,000 kg.
Local	Transportation performed within a metropolitan area and its commercial zone.
Marine Bulk	Loose material; dry or liquid.
Marine Containerized	Containers/trailers on ships.
Marine Other General	Non-containerized general cargo.

Cargo	
Rail Carload	All rail freight traffic other than Rail Intermodal.
Rail Intermodal	Containers/Trailers on flat cars and RoadRailer Services.
Service Contract	Formal written contract between your firm and a conference whereby your company commits a certain minimum quantity of cargo over a fixed time period to the conference in exchange for a negotiated rate and/or defined service level. Service contracts must be filed with the Canada Transportation Agency and are confidential.
Shipment and Traffic	Both terms refer to the volume of freight shipped by a company.
TOFC	Trailer on flat car
Transportation Services by Mode	When a combination of modes is used to transport freight, please answer the survey questions with regard to the origin/destination for each mode rather than the initial origin and final destination of the freight. For example, in a shipment from Canada to the U.S., if the goods are loaded on rail at origin and then transferred at another point in Canada to truck for the movement of the goods to the U.S., you answer questions on 1) domestic rail and 2) Canada-U.S. trucking transportation services. Similarly, companies with goods imported into Canada through a Canadian port from overseas and transferred to a doublestack train would respond to questions on both international marine and domestic rail movements. Local pickup and delivery should not be included as a modal movement.
Truckload (TL)	Trucking services carrying shipments weighing 10,000 kg or more.

Survey of Shippers

for the *Canada Transportation Act* Review

April 2001

Survey of Shippers for the *Canada Transportation Act* Review

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1. Introduction

1.1 Purpose

The purpose of the survey, conducted during January and February 2001, was to help review the operation of the *Canada Transportation Act* by seeking information from shippers on their experience with the availability, use, cost and quality of transport services during 2000 and changes in the five years since 1995.

1.2 Sample, questionnaire, data collection

The sample of shippers to be surveyed was developed from membership lists of industry associations (Appendix 1). This approach had been taken by the Canadian Transportation Agency (and before that the National Transportation Agency) in annual surveys from 1988 to 1994.[1] Grain shippers, represented in this survey by members of the Western Grain Elevator Association and the Inland Terminal Association of Canada, were not included in the Agency's surveys.

Questions were asked on the company's facilities by area and industry, size (freight bill, employees), and use of transport services, followed by specific questions on their experience with rail, truck, marine and/or air freight modes. The questionnaire was based on that used by the Agency in 1994.

Shippers were contacted by mail and given the option of completing a questionnaire online on the *Canada Transportation Act* Review web site or completing the survey document and returning it by mail. A personally addressed letter and return envelope were sent with the survey.

The online survey was efficient for the respondent; for example, questions were asked only about particular modes used. Background information and definitions were available through direct links. If a user was interrupted during the questionnaire, a password enabled the person to resume at the same question. There were also gains in efficiency in processing responses.

1.3 Response

From 1,812 surveys successfully mailed, 316 responses were received (17%). A few of these were non-shippers and others opted out, for example, because information was not available on transport service provided.

Of the 261 usable responses, 27% were completed on the web site. Given some prior anecdotal suggestions of 'survey fatigue', it is possible that the online survey option encouraged a higher response than expected. The overall response rate of 17% can be compared with response rates for Agency surveys of 13% and 16% in 1993 and 1994.

1.4 Economic context for the survey

Features of the economic environment in which shippers operated in 2000 and previous years include the following:

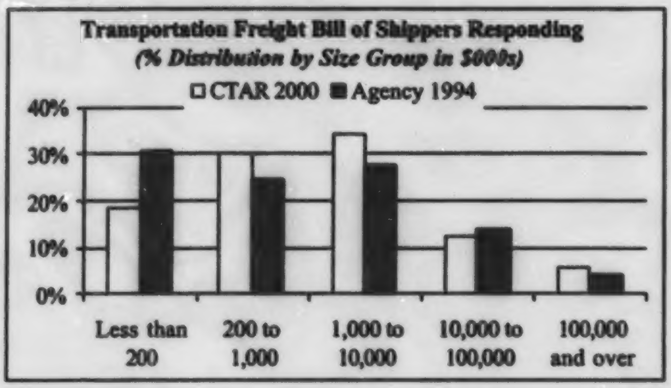
- There had been solid economic growth, with consistently strong growth each quarter since mid-1998. The slowdown in the last quarter of 2000 may have preoccupied some shippers, especially exporters. The main brake had come from exports, as domestic demand remained strong (except for motor vehicles).[2]
- Most industries (19 of 24 industry groups) enjoyed higher profits over the year 2000, although dampened in some cases by the slowdown in export demand at the end of the year and higher energy costs.
- Forestry companies faced a continued glut in wood product markets. There was a major drop in lumber prices during 2000. Pulp production had a strong year in 2000, but fell by almost 6% in December. Despite this setback late in the year, pulp and paper prices rose 12% in the year 2000.
- After hitting a 15-year high in 1995, wheat prices began to fall in mid-1996. Over the next three years, grain prices declined by 36.5% and oilseed prices by 28%. Prices remained low into the year 2000. There was an increase in foreign demand for wheat in December 2000.[3]
- Export growth in the machinery/equipment and energy products sectors continued in 2000. There were major price increases in the mineral fuel and industrial chemical sectors. Prices for steel products fell in response to the decline in motor vehicle manufacturing.
- A high volume of shipments through most of 2000 contributed to an increase in annual profits for the transportation and warehousing sector to $3.6 billion from $2.2 billion in 1999.[4] Higher fuel costs in the last quarter of the year contributed to a 25% drop in profits in that quarter.
- A decline in nominal terms in average rail and trucking freight rates was reported for 1995-98.[5]

1.5 Who answered the survey?

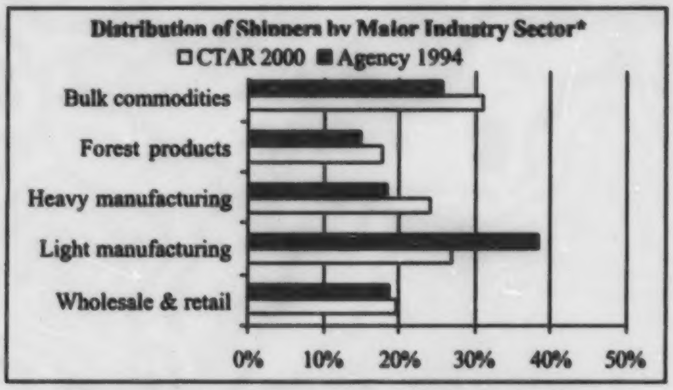
Shippers responding to the survey were representative in terms of size, industry, location and transport modes used. There were 261 respondents, operating about 6,000 facilities and employing an estimated 250,000 people across the country.

Results are compared with those of the 1994 survey, which used the same methodology. With access to other membership lists, the sample size for the 1994 survey was 3,417, with a 16% response (561), compared with 1,812 and 17% (261) for the 2000 survey.

There were more medium-sized shippers, in terms of freight bill, and fewer small shippers in this survey, compared with 1994. Inflation may be a factor, as the distribution by number of employees is very similar between the two surveys.



There were relatively more bulk commodity shippers and heavy manufacturers in the current survey than in 1994. Bulk commodity industries include agriculture, mining, non-metallic mineral products (potash, sulphur), petroleum, coal and chemicals. Grain shippers were included in this survey. Heavy manufacturing includes primary metals, fabricated metal products, machinery and transportation equipment.



* Shippers can be in more than one sector, so totals exceed 100%.

Almost all shippers (93%) used truckload or less-than-truckload services to some extent, but it was the primary mode used (carrying more than 50% of traffic) for 51% of shippers. Rail was the primary mode for 11% of all respondents.

	% of Total Responses
Truck (TL or LTL)	93%
Courier/Small Parcel Express	54%
Rail	46%
Marine	44%
Air Freight	34%

* Shippers can be using more than one mode.

The following table, which includes those using truck and rail for at least part of their traffic, illustrates the variety of combinations of modes used.

Truck users		Rail users	
Truck only	25%	Rail and truck only	38%
Truck and rail only	19%	Rail, truck and marine only	31%
Truck, rail and marine only	15%	Rail, truck, marine and air	26%
Truck, rail, marine and air	13%	Rail only	3%
Truck, marine and air only	12%	Rail and marine only	2%
Truck and air only	9%	Total	100%
Truck and marine only	5%		
Other	1%		
Total	100%		

Facilities owned by respondents were located in all regions of Canada, the U.S. and other countries. Relatively more shippers had facilities outside Canada in 2000 than in 1994. The following table shows the percentage of responding shippers with facilities at a given location. Because a shipper can have facilities at more than one location, the total exceeds 100%.

Distribution of Shippers by Location

	CTAR 2000	Agency 1994
Newfoundland	5%	6%
Prince Edward Island	3%	3%
Nova Scotia	6%	10%
New Brunswick	8%	10%
Quebec	41%	39%
Ontario	55%	60%
Manitoba	14%	14%
Saskatchewan	11%	9%
Alberta	21%	22%
British Columbia	24%	24%
Yukon	2%	1%
Northwest Territories	3%	1%
Nunavut*	0%	
U.S.A.	18%	13%
Mexico	5%	2%
Other Countries	7%	6%

* Included in Northwest Territories in 1994 survey

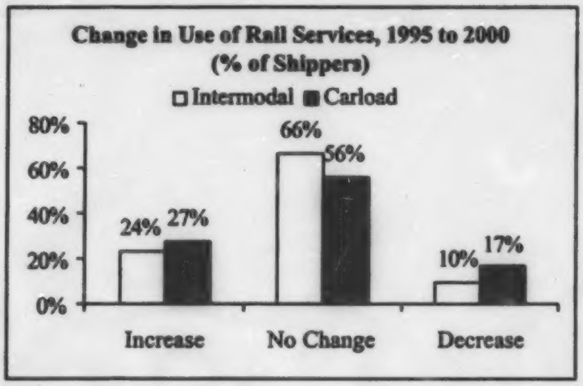
2. Rail

There were 120 shippers among the respondents using rail carload or intermodal service or both, and for a quarter of these shippers, rail movements accounted for more than 50% of their traffic. Use of rail carload service was reported by 36% of all respondents and rail intermodal service by 23%.

Forty-five rail users indicated that some of their rail traffic originated or terminated on short line railways in 2000. For 40% of these, it was 10% or less of their total rail traffic. There were 12 companies using only short lines for their rail traffic.

2.1 Traffic

Over the five years since 1995, rail carload volumes increased for 27% of shippers reporting the use of such services, and one-fifth of these had increases of more than 50%. Two-thirds of rail intermodal shippers reported no change in their traffic volumes by that mode.



Since 1995, 34% of rail carload users had shifted some traffic from truck, with freight rates given as the main reason for the shift by almost 60% of them. Around 20% had shifted traffic from truck to rail intermodal, again with price being the main reason given.

2.2 Service satisfaction

In 2000, 71% of surveyed shippers using rail carload services and 84% of rail intermodal users were satisfied with overall service provided. The carload rating is the same as in 1994, whereas there were relatively more dissatisfied intermodal service users in 2000.

The level of satisfaction was higher for intermodal service (89%) and lower for carload service (63%) for shippers where rail was the primary mode (accounting for more than 50% of total traffic).

Carload shippers with some traffic on short line railways had a similar overall level of satisfaction (68%); but for the dozen shippers that were using only short lines, half were dissatisfied.

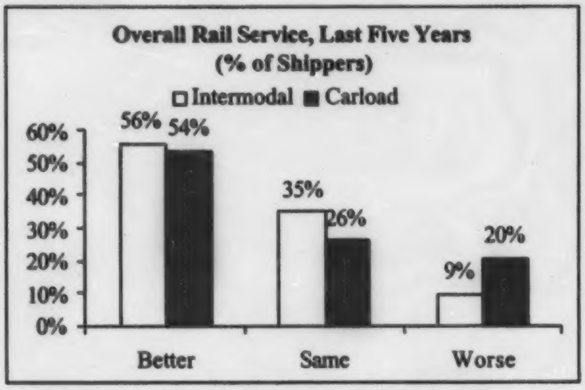
Satisfaction with Rail Service

	Satisfactory	Unsatisfactory
Intermodal		
CTAR 2000	82%	18%
Agency 1994	91%	9%
Carload		
CTAR 2000	71%	29%
Agency 1994	71%	29%

Large shippers (with a total freight bill over $10 million) tended to be less satisfied with carload services (67%) than the average, but more satisfied with intermodal service (89%).

Carload shippers of forest products (78% satisfied) and bulk commodities (74%) were more likely to be satisfied than those in manufacturing industries (62%).

More than half the shippers using rail reported an improvement in service over the previous five years, while 20% of carload users said service was worse. Poor rail service was a major reason given by the 12% of trucking users that shifted some traffic from rail to truck over the last five years.



2.3 Service factors

Rail carload users in 2000 were more likely to be satisfied with product care/cargo handling and shipment tracing than with service reliability, switching services and equipment supply. Equipment supply had deteriorated for 29% of those responding and service reliability had got worse for 26%. Shipment tracing had shown significant improvement.

Rail intermodal users were more likely to be satisfied with transit time and service frequency than with claims handling and equipment supply. Transit time improved for 55% of those responding, while equipment supply deteriorated for 15%.

The only service factor for which rail carload services received a higher rating than intermodal was product care/cargo handling.

2.4 Rates

Thirty-five per cent of domestic carload shippers reported decreased rates over the five years from 1995 and another 18% had no change. As indicated above, better rates was the main reason given by shippers that had shifted some traffic from truck. Between 56 and 58% of intermodal and transborder carload shippers reported increased rates.

Comparison Between 2000 and 1995 Rail Rates

	Increase	No Change	Decrease
Intermodal			
Domestic	57%	16%	27%
Canada-US & Mexico	56%	30%	15%
Carload			
Domestic	47%	18%	35%
Canada-US & Mexico	58%	15%	26%

For the 47% of domestic carload shippers that experienced increased rates, the increases were relatively small, in the 1-10% range. Larger increases in rates were more likely for intermodal and transborder than for carload or domestic users.

Relatively more large shippers (with freight bills over $10 million) reported increased domestic carload rates than smaller shippers. Decreases in domestic carload rates were more likely in the forest products sector.

2.5 Competition between railways

Sixty-eight per cent of those using rail found Canadian carriers interested in competing for their business in 2000, compared with 58% in 1994. About 25% in 2000 said Canadian carriers were "very interested"; the rest said they were "interested". U.S. carriers were more likely to be "indifferent" about competing than Canadian carriers.

Volume made a difference to carriers' willingness to compete, according to 73% of shippers using rail.

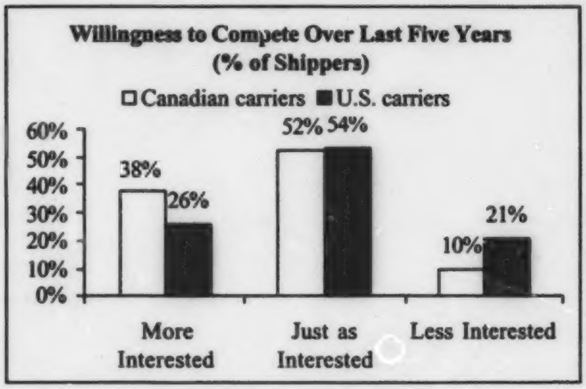
None of the shippers for which rail was the primary mode considered Canadian railways to be indifferent – 67% said that the railways were interested in competing; 33% said they were not interested.

Willingness of Rail Carriers to Compete in 2000

	Interested	Indifferent	Not interested
Canadian carriers	68%	16%	15%
U.S. carriers	45%	40%	15%
Agency 1994			
Canadian carriers	*58%*		*42%*
U.S. carriers	*72%*		*28%*

NB. "Indifference" was not an option given in the 1994 survey.

Over the five years since 1995, 38% of shippers found Canadian carriers more interested in competing (26% of primary rail users). More than half found carriers just as interested. Whereas 10% said Canadian carriers were less interested, 21% said that about U.S. carriers.



Shippers in the forest products sector were more likely to find Canadian carriers willing to compete for their traffic than those in heavy manufacturing industries (primary metals, fabricated metal products, machinery, transportation equipment).

2.6 Factors contributing to competitive conditions

Shippers were asked to rank eight factors in terms of their importance in achieving competitive terms and conditions. Access to more than one railway was ranked most frequently as the most important, followed by access to other modes of transport. For shippers using mainly rail, the existence of other legislative provisions (final offer arbitration, mediation, public investigation) was considered most important as often as access to other modes of transportation.

Confidential contracts was the next factor ranked as most important by most shippers using mainly rail.

Most Important Factor in Achieving Competitive Rail Services
(% of responses)

	Primary rail users*	Large shippers**	All rail users
Access to more than one railway	38%	38%	30%
Access to other modes of transportation	16%	21%	19%
Existence of other Act provisions	16%	9%	7%
Confidential Contracts	13%	15%	15%
Competitive Line Rates (CLRs)	9%	6%	12%
Interswitching	6%	6%	4%
Joint Track Usage	3%	4%	6%
Joint Rates	0%	0%	8%
	100%	100%	100%

* Rail accounts for more than 50% of total traffic

**Total freight bill of over $10 million

2.7 Access to rail service

About 65% of shippers using rail responded to questions about their access to rail, including some grain producers and terminal operators. Excluding the latter, shippers indicated that about 65% of their facilities had access to the lines of only a single railway; of these, 60% were outside interswitching limits (30 kilometres) with another railway. Thus, more than 60% of all their facilities had access to more than one railway or, if they had access to only one railway, were within interswitching limits.

For grain producers and elevator operators (6 companies responding), 97% of facilities were reported to have access to a single railway and just 14% of these were within interswitching limits. Thus, for these companies, 17% of facilities had access to more than one railway or were within interswitching limits.

2.8 Intermodal competition

Access to other modes of transport was the second highest ranked factor by shippers using rail in helping to achieve competitive terms and conditions for rail services.

Shippers using rail were asked whether shipping by truck or other mode was a viable option for them and, if so, for how many of their facilities. For the 98 shippers responding to the question, another mode was a viable option for 9% of all facilities.

There was a greater likelihood that shippers with facilities enjoying intermodal competition had a decrease in rates over the last five years; but this cannot be attributed to such competition. Many shippers had both kinds of facilities, i.e., those with the option of another mode and those without.

Shippers with facilities where there was the option of another mode tended to have the same level of satisfaction with service as the average of all shippers by rail.

2.9 Other forms of competition

The survey results indicate some presence of market competition. Shippers using rail were asked whether their products competed with those of producers from other countries or other regions using different railways and, if so, for how many of their facilities. The response was affirmative for 11% of all facilities.

The survey could not determine whether this competition had an impact on freight rates or service levels. While shippers that owned facilities subject to such competition were more likely to report a decrease in rail rates over the last five years than the average of all rail shippers, the difference was not significant and could be attributed to other factors.

Shippers were also asked whether they were able to use a different carrier by shipping to or from a different destination or by using a substitute product. A small number of rail shippers indicated that this was the case for some facilities.

To determine whether other forms of indirect competition existed between rail carriers, shippers using rail were asked whether their products could be trucked to reload centres of other railways and, if so, to how many of their facilities this applied. While 48% of shippers said at least one of their facilities was in this category, it applied to only 6% of all facilities of all respondents. The impact of such competition on freight rates or level of service could not be identified.

Finally, a few shippers indicated that they owned a facility or facilities on a different railway that enabled them to apply pressure in obtaining rates or service.

2.10 Use of interswitching and CLRs as bargaining tools

Thirty-nine per cent of carload shippers in railway negotiations over the last five years said they had used the possibility of interswitching as a bargaining tool. One-quarter had used the possibility of a competitive line rate as a bargaining tool.

Shippers that had used these bargaining tools in negotiations had a more favourable opinion of the railways' willingness to compete against each other than shippers than shippers that had not used them.

2.11 Use of interswitching

About one-quarter of rail carload respondents reported interswitching cars in 2000. Of the 35,000 cars interswitched, 45% were in Ontario. Shippers that had cars interswitched were more likely to find Canadian carriers willing to compete, with 75% reporting that carriers were interested, compared with the overall average of 68%.

3. Trucking

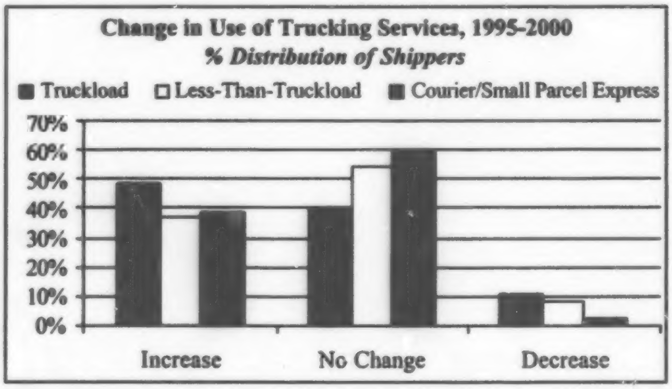
There were 244 respondents using truckload or less-than-truckload services or both, and 142 using courier/small parcel express services.[6] Use of truckload (TL) service was reported by 86% of respondents, less-than-truckload (LTL) service by 67%, and courier/small parcel express by 54%.

Some 12% of shippers using TL or LTL service reported they had shifted traffic from rail to truck since 1995. Changes in market conditions, price and rail service were the main reasons given.

A shift from TL/LTL to courier/small parcel express service was reported by 13% of shippers using the latter type of service in 2000. A change in market conditions was the reason given for all reported changes from TL to LTL (by 8% of LTL users).

3.1 Traffic

Almost half the shippers using truckload services reported an increase in volumes shipped over the five years since 1995. More than a third of these had increases of more than 30%. Very few users of courier/small parcel express services reported a decrease in use of those services.



Increases over the last five years were more likely for truckload shippers in domestic rather than transborder markets.

3.2 Type of trucking services

Most shippers used for-hire carriers, although almost 40% of shippers using truck services indicated they used at least some private trucks and 54% of these said that usage had increased over the last five years.

About 20% of both TL and LTL users were shipping only to domestic markets. Some 15% of TL shippers were serving only transborder markets. The remainder were shipping to both domestic and transborder markets.

Approximately 20% of shippers reported that they had changed between Canadian and U.S.-based carriers for their transborder shipments between 1995 and 2000. Equal numbers had shifted traffic from a Canadian-based to a U.S.-based carrier or vice versa.

3.3 Service satisfaction

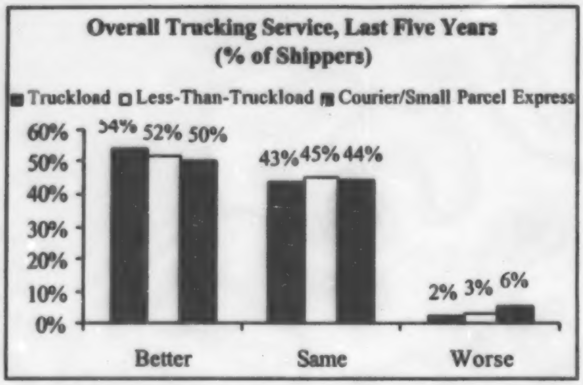
There were high levels of satisfaction in 2000 with truck services, as in 1994, and very few reported that service had deteriorated. About half the users said service had improved over the last five years.

All shippers for which LTL was the primary mode (more than 50% of their traffic) were satisfied with that service, while 94% of those with TL as the primary mode were satisfied.

All large shippers (total freight bill at least $10 million) were satisfied with truckload services, compared with 94% of medium and 95% of small shippers (i.e., those with annual freight bills less than $1million).

Satisfaction with Trucking Service

	Satisfactory	Unsatisfactory
Truckload		
CTAR2000	96%	4%
Agency1994	96%	4%
Less-Than-Truckload		
CTAR2000	96%	4%
Agency1994	94%	6%
Courier/Small Parcel Express		
CTAR2000	96%	4%



Overall Trucking Service, Last Five Years
(% of Shippers)

Shippers were asked to rate levels of service provided in a number of areas, such as equipment supply, frequency, reliability, transit time, product care and cargo handling. With the exception of claims handling and shipment tracing, more than 90% of shippers were satisfied with individual service factors.

Seventeen per cent of LTL shippers and 16% of those using courier/small parcel express services were dissatisfied with claims handling. Shipment tracing services were unsatisfactory for 13% of TL and 11% of LTL shippers. These two service factors were also among the lowest rated in the 1994 survey.

3.4 Rates

For domestic traffic, 86% of trucking users and 81% of courier/small parcel express users reported increases in rates since 1995. With close to 90% of domestic TL or LTL users attributing at least part to a fuel surcharge, and with most shippers reporting that the size of the increase was in the lowest category (up to 10%), the response likely reflects their recent experience in 2000.

Comparison Between 2000 and 1995 Trucking Rates

	Increase	No Change	Decrease
Truckload			
Extra-Provincial Domestic	86%	9%	6%
Canada-US&Mexico	84%	9%	8%
Less-Than-Truckload			
Extra-Provincial Domestic	86%	9%	4%
Canada-US&Mexico	83%	9%	8%
Courier/Small Parcel Express			
Extra-Provincial Domestic	81%	13%	6%
Canada-US&Mexico	81%	13%	5%

Increase influenced by fuel surcharge?

	% Agreeing
Truckload	
Extra-Provincial Domestic	88%
Canada-US&Mexico	83%
Less-Than-Truckload	
Extra-Provincial Domestic	86%
Canada-US&Mexico	80%
Courier/Small Parcel Express	
Extra-Provincial Domestic	69%
Canada-US&Mexico	65%

3.5 Concerns about trucking

While shippers referred to the need for continued deregulation, many expressed concern about safety issues and the lack of standardization of rules and regulations between provinces, as well as between Canada and the United States. A few shippers suggested federal government action on safety, a single registration and fuel tax relief.

4. Marine

Although 115 shippers reported the use of marine services, few responded in detail about their experience with marine services. According to some, this was because of a lack of direct information about services received. Shippers often relied on intermediaries for multi-modal movements, and it was not the principal mode of transport in most cases. For about three-quarters of shippers reporting the use of marine, it accounted for 30% of their total traffic or less.

Thirty-six per cent of respondents used marine containerized service, 13% shipped non-containerized general cargo, and 10% used bulk commodity services.

4.1 Traffic

While 36% of marine containerized service users experienced growth in shipments over the five years to 2000, half reported no change. More than 75% of shippers using non-containerized cargo or bulk commodity services said there had been no change.

4.2 Arrangements made for marine services

Two-thirds of those reporting the use of marine container services for international shipments made arrangements through intermediaries, compared with 40% in the 1994 survey. Conference lines were used by more than a third of the shippers and independent lines by about 25%.

More than 70% of non-containerized general cargo shippers used intermediaries, while bulk commodity shippers used intermediaries, charter operators and company vessels were most commonly.

4.3 Service satisfaction

There was a relatively high level of satisfaction with marine services in 2000, similar to that recorded in 1994. Up to 70% of shippers found no change in the last five years.

Satisfaction with Marine Service

	Satisfactory	Unsatisfactory
Containerized Cargo		
CTAR2000	95%	5%
Agency1994	94%	6%
Other General Cargo		
CTAR2000	89%	11%
Agency1994	92%	8%
Bulk Commodities		
CTAR2000	100%	0%
Agency1994	95%	5%

Comparison Between 2000 and 1995 Marine Service

	Better	Same	Worse
Containerized Cargo	33%	65%	2%
Other General Cargo	22%	70%	9%
Bulk Commodities	50%	50%	0%

More than 90% of respondents using containerized cargo services were satisfied with all service factors except shipment tracing, with which 15% were dissatisfied. The same percentage of those using non-containerized general cargo were also dissatisfied with shipment tracing service. Thirty-five per cent of shippers said this service had improved over the previous five years, however, the highest percentage for any factor.

4.4 Rates

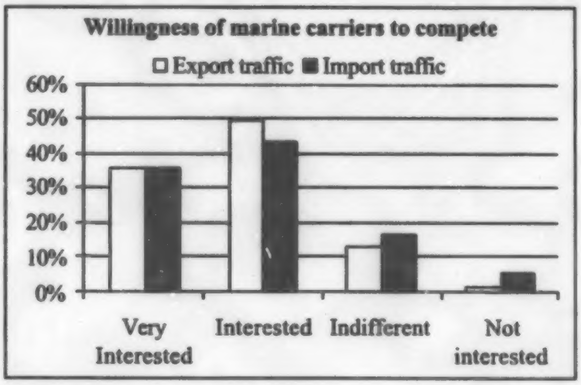
More than half the shippers by marine to or from overseas markets reported increased general cargo rates over the previous five years. One-fifth of exporting shippers reported a decrease in rates. (Note that only half the shippers using these services responded.)

Comparison Between 2000 and 1995 Marine Rates

	Increase	No Change	Decrease
Other International - Export	59%	21%	20%
Other International - Import	57%	37%	7%

4.5 Competition between carriers

About 85% of the shippers exporting by marine that responded to the question said that carriers were interested in competing for their business, the same percentage as in 1994. More than 35% said carriers were very interested.


Willingness of marine carriers to compete

4.6 Impact of the *Shipping Conferences Exemption Act, 1987*

Just 40% of shippers using marine services commented on the effect of SCEA. Of these, 86% reported that SCEA had no known effect on their business. This was similar to the 1994 results (83%). Of the small minority indicating some benefit, the most frequently mentioned provision that enhanced competition was Independent Action. The complaint resolution mechanism was least frequently mentioned as being beneficial.

Seventy per cent of exporters and 58% of importers reported moving goods under Independent Action in 2000. Almost 40% of exporters responding to the question and 46% of importers used service contracts. Such contracts covered less than 40% of the overseas trade of most of these shippers.

5. Air Freight

Eighty-eight respondents used air freight service, but it was a major mode of transport for very few of these. It accounted for 10% of total traffic or less for about 75% of air freight users.

5.1 Traffic

About 20% of shippers using air cargo services had at least half their traffic going to Canadian destinations. One-third were shipping mainly to the U.S., while 30% were shipping mainly to other international destinations (excluding Mexico).

Use of air freight services increased from 1995 to 2000 for 27% of shippers and remained the same for more than two-thirds. For those increasing their use, 38% had an increase of up to 10%. For 16%, use increased by more than 50%.

5.2 Type of service used

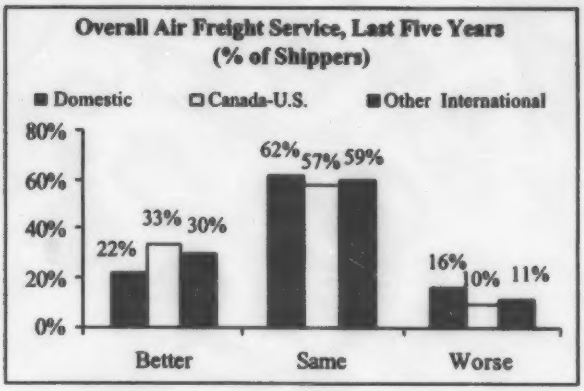
Most shippers used scheduled services on all-cargo aircraft. Such services were used by 77% of domestic shippers and 73% of Canada-U.S. and other international shippers. The second choice was cargo services offered on passenger aircraft.

5.3 Service satisfaction

Compared to the 1994 results, relatively more shippers using air freight services to domestic and U.S. destinations found the overall level of service unsatisfactory, with 16% of domestic shippers saying that service had deteriorated.

Satisfaction with Air Service

	Satisfactory	Unsatisfactory
Domestic		
CTAR2000	85%	15%
Agency1994	93%	7%
Canada-U.S.		
CTAR2000	86%	14%
Agency1994	93%	8%
Other International		
CTAR2000	88%	13%
Agency1994	83%	17%



Major areas of concern were the number of carriers serving the market and service reliability. For these factors, 28% of shippers responding were dissatisfied and one-third said service had deteriorated in the last five years. A high percentage of respondents rated frequency of service and transit time as satisfactory.

5.4 Rates

A majority of shippers experienced increased air cargo rates over the last five years. Increases were more likely on Canada-Other international and Canada-U.S. routes than on domestic routes. One-quarter of shippers using domestic air cargo services experienced no change in price.

Comparison Between 2000 and 1995 Air Rates

	Increase	No Change	Decrease
Domestic	72%	26%	2%
Canada-U.S.	83%	15%	2%
Other International	87%	10%	3%

Increase influenced by fuel surcharge?

	% indicating agreement
Domestic	62%
Canada-U.S.	64%
Other International	60%

5.5 Domestic air freight pricing arrangements

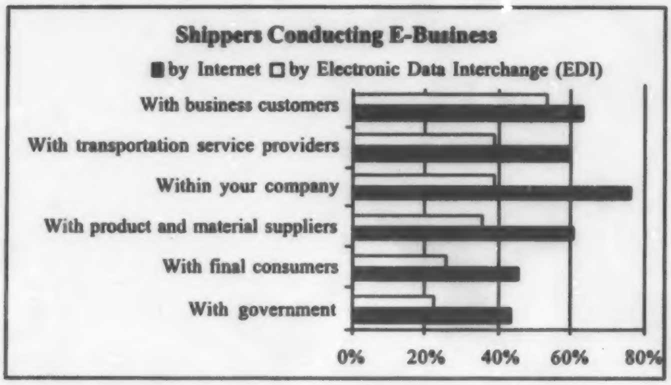
In 2000, 12% of shippers using air freight reported moving domestic air cargo under terms and conditions set out in a confidential contract. This compares with 9% recorded in 1994 and 18% in 1993.

6. E-Business

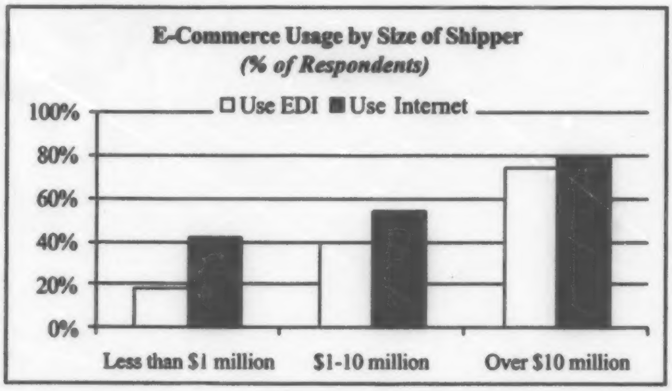
6.1 Current usage

All shippers were asked about their use of electronic business methods. More than half (53%) of respondents were using electronic data interchange (EDI) with their customers. Thirty-nine per cent of shippers were using EDI with transportation service providers and 36% with product and material suppliers.

About 60% of shippers were using the Internet with business customers and input providers (including transport carriers). More than three-quarters of shippers indicated using the Internet within their company.



Size of firm is a significant factor affecting e-business use. About 75% of large shippers (total freight bill of over $10 million) reported using EDI with transport service providers, compared with 18% of small shippers.



Controlling for size, use of e-business with business customers was more prevalent among shippers in manufacturing industries than among those in bulk and forest product industries.

6.2 Planned usage

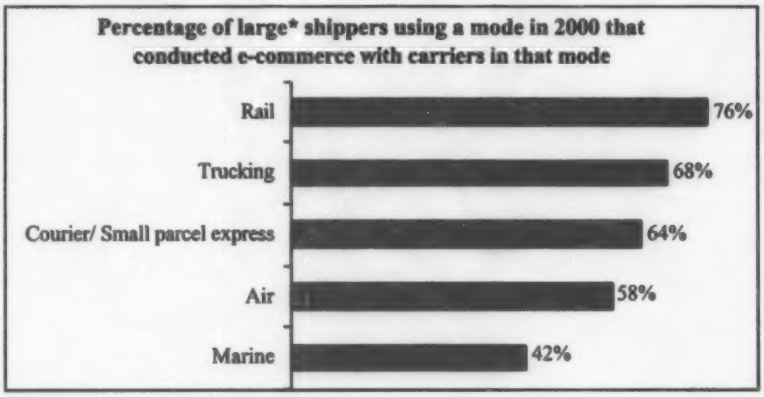
If all shippers implemented their reported plans to use EDI or the Internet, 65% would be using EDI with business customers and 56% with transportation service providers. About 80% would be using the Internet in such business dealings.

Shippers Conducting or Planning E-Business

	by Electronic Data Interchange (EDI)	by Internet
With business customers	65%	81%
With product and material suppliers	56%	76%
Within your company	56%	80%
With transportation service providers	56%	77%
With final consumers	38%	59%
With government	32%	52%

6.3 Usage with transport service providers

Large shippers using rail were the most likely (76%) to be using e-business (EDI or Internet) with carriers in that mode, compared with 68% of those using trucking, 64% using courier/small parcel express services, and 58% using air freight.



*Total freight bill of over $10 million

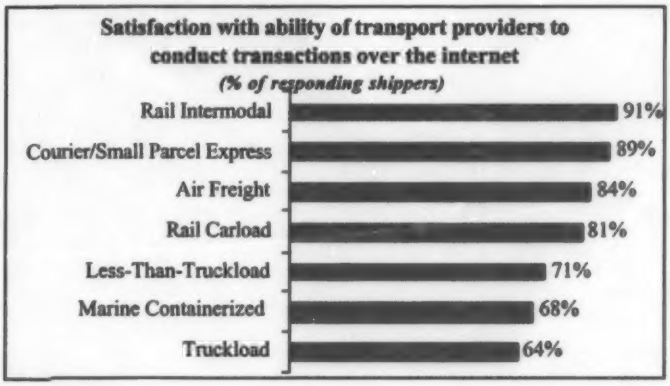
For all shippers responding, the percentages reporting the use of e-business with transportation providers were as follows:

Rail	52%
Courier/ Small parcel express	49%
Trucking	42%
Air	34%
Marine	25%

Forty-one per cent of shippers using trucking said they used third party logistics companies to meet their transportation requirements, compared with 28% for air, 27% for marine, 14% for rail users, and 15% of users of courier/small parcel express services.

6.4 Satisfaction with e-business abilities of transport service providers

Shippers were asked to rate transport carriers on their ability in 2000 to conduct transactions over the Internet. Those using rail, courier/small parcel express and air freight services tended to be more satisfied with the current level of service than shippers using trucking or marine. Shippers in all size groups tended to be less satisfied with truckload services, but especially large shippers.



About 60% of shippers said that trucking (TL and LTL) companies had improved in their provision of this service over the last five years. Improvement was noted more often by those using courier/small parcel express services (74%), rail intermodal (66%), and rail carload (63%).

6.5 Impact of e-business on distribution strategies

Fifty-five per cent of shippers reporting e-business use said it had enabled their firms to implement new distribution strategies with business customers, 50% said it enabled such strategies with product and material suppliers, and 46% reported an impact within the shipper's own company.

APPENDIX
Shipper Associations

Members of the following associations were surveyed:

Association of International Automobile Manufacturers of Canada
Automotive Parts Manufacturers' Association
Canadian Association of Importers and Exporters
Canadian Chemical Producers' Association
Canadian Fertilizer Institute
Canadian Industrial Transportation Association
Canadian Manufacturers and Exporters (list obtained from web site)
Canadian National Millers' Association
Canadian Petroleum Products Institute
Canadian Plywood Association
Canadian Produce Marketing Association
Canadian Pulp and Paper Association
Canadian Shippers' Council
Canadian Steel Producers Association (list obtained from web site)
Cariboo Lumber Manufacturers' Association (list obtained from web site)
Coal Association of Canada
Coast Forest and Lumber Association
Council of Forest Industries
Inland Terminal Association of Canada
Interior Lumber Manufacturers' Association
Machinery & Equipment Manufacturers' Association (list obtained from web site)
Mining Association of Canada
Northern Forest Products Association (list obtained from web site)
Propane Gas Association of Canada Inc.
Quebec Food Processors' Association
Quebec Lumber Manufacturers' Association
Quebec Produce Marketing Association
Western Canadian Shippers' Coalition
Western Grain Elevator Association

Notes

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[1] For example, National Transportation Agency, "Transportation Trends & Issues, 1994 Annual Review".

[2] Statistics Canada, National Economic and Financial Accounts, "The Daily", February 28, 2001, p.1.

[3] Statistics Canada, Gross domestic product at factor cost by industry, "The Daily", February 28, 2001, p.3.

[4] Statistics Canada, Quarterly financial statistics for enterprises, "The Daily", February 27, 2001, p.2.

[5] Transport Canada, "Transportation in Canada, 1999 Annual Report", p.172 and p.175.

[6] These are specialized services for delivery of envelopes and small packages, often requiring a combination of services such as intercity bus, air cargo and less-than-truckload. Major carriers include Canada Post, Canpar, Federal Express, Loomis, Purolator, RPS, TNT Express Worldwide and United Parcel Service. For comparison purposes, it is included here with trucking services.

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Kevin Antonides
Valuation of Rail Corridors: A Brief for the *Canada Transportation Act* Review

This report provides a professional real estate appraisal perspective with regard to valuing the real estate component of rail corridors in the context of the provisions of the *Canada Transportation Act*. The report offers an overview of fundamental appraisal principles, which are the basis of methods followed in valuing corridors, and identifies accepted conventional appraisal methods. It goes on to apply these concepts to the issue of valuing rail corridors, taking into account the relevant considerations, and concludes with recommendations.

R.L. Banks & Associates, Inc.
North American Railway Restructuring and Implications for Merger Policy

This paper was commissioned in relation to the Panel's consideration of the appropriateness of the current legislative and regulatory framework for dealing with the public policy requirements that may arise from newly emerging industry structures. The paper discusses the dimensions, causes and consequences of restructuring of North American railways in the past two decades and identifies the policy concerns arising from that experience, principally those associated with railway mergers. The principal conclusion is that further concentration of the North American railway industry should be permitted only under the most stringent guarantees that competition will not be eroded.

Michel Boucher
The Newly Commercialized Transport Infrastructure Providers: Analysis of Principles of Governance, Accountability and Performance

Transport Canada's commercializations of airports, ports, the air navigation system and the St. Lawrence Seaway are examined. Governance processes are considered using a formal analysis of principal/agent relationships. In the case of airports, the study concludes that lack of controls has permitted some excessive managerial discretion and excessive costs. Delegation of air navigation to NAV Canada is judged effective, though air traffic controllers can appropriate quasi-rents. The latest delegations, to independent port and the St. Lawrence Seaway authorities, are judged successful because of controls imposed by the government. The operational performance and price structure of the agencies are also examined to assess their ability to recover costs and finance investments. The study concludes that NAV Canada, the ports, and St. Lawrence Seaway Management Corporation can meet their financing needs, but there are doubts about the ability of some of the smaller airport authorities to do so.

Garland Chow

Adoption and Utilization of E Business in the Transport Sector: Overview of the Transport Industry

This paper examines the importance of electronic business in the transportation industry by following the adoption and use of e-business technology among Canadian and U.S. carriers. Three separate studies focus on e-business in trucking, marine and rail. For each mode, the paper explores the benefits in best practices in e-business and the barriers preventing its adoption. The study also compares Canadian and U.S. competitors with respect to meeting shippers' needs using e-business capabilities. Finally, the paper suggests public policy changes that could further the development of e-business in Canadian transportation.

The Conference Board of Canada
The Effectiveness of the *Canada Transportation Act* Framework in Sustaining Railway Capital Spending

This paper outlines considerations related to the railways' need to provide for and maintain their own infrastructure. This responsibility, along with the high capital intensity of railways, imposes a large annual investment requirement and highlights, in turn, the need for a policy and regulatory environment conducive to generating the necessary funds. The paper notes that over the past forty years, the railways' real net investment in plant and equipment was negative more often than positive; it was strongly negative between 1985 and 1995, in part because the regulatory regime did not sufficiently facilitate productivity improvement and contributed to a low return on capital. By contrast, policy initiatives such as privatization of CN and passage of the *Canada Transportation Act* contributed to a significant upsurge in railway capital spending after 1995. From an investor point of view, Canadian railways have improved their financial performance significantly. Nevertheless, there remains an overhang of long years of under-investment, uncertainty about the future regulatory environment, and questions about the railways' ability to sustain earnings across the economic cycle. The Class I freight railways will need to invest an estimated $1.3 billion annually over the next five years, and maintaining a climate conducive to attracting capital will be important.

D.W. Flicker
Canada-United States Railway Economic Regulation Comparison

This study compares railway economic regulations in Canada and the United States. Because of the size and significance of the U.S. economy, as well as the close and growing linkages between the Canadian and U.S. economies and their rail industries, this information was essential to the Panel's consideration of rail policy issues. The comparison covers the transportation policy statement; the regulatory agency; market entry and exit; level of service; rate provisions; exemptions; tariffs; confidential contracts; cost of capital and revenue adequacy; final offer arbitration; interswitching and the use of terminal facilities; competitive line rates; market dominance; and maximum rates. The two countries' statutes are found to have strong similarities, in that both fall squarely within the deregulatory trend of the final decades of the twentieth century while addressing the recourses shippers require in circumstances where a question of an imbalance of market power arises. The statutes differ, however, in the instruments chosen to deal with similar issues, reflecting the differences in political economy between the two countries and in the development and history of their rail industries.

David Gillen, Len Henriksson, Bill Morrison
Airport Financing, Costing, Pricing and Performance

The paper takes a sample of costs and prices at 35 airports to evaluate the effects of the 1995 National Airports Policy on airport investment, service delivery, pricing and financing. It examines costs and investment, how they varied with traffic level, and the 'fiscal capacity' and 'fiscal effort' of the sample airports. It also considers the integration of airline and airport policy. The main recommendation is that National Airport System airports be split into two tiers, one including the largest eight, to remain under lease from Transport Canada, and the second including all smaller NAS airports, to be fully privatized eventually. Lease payments from the largest should be placed in an investment fund, to which all airports would have access. The report also makes recommendations on the basis for lease payments, airport regulation, treatment of gates and slots to ease market entry by carriers, and airport taxation.

John Gratwick
The Evolution of Canadian Transportation Policy

The report describes the evolution of the statement of national transportation policy in the transportation acts of 1967 and 1987 and the *Canada Transportation Act* of 1996. It provides a brief history of transport and government policy from the early nineteenth century, offers an interpretation of the motivation behind the first statement of national transportation policy in the 1967 act, and reviews policy developments leading to its modification in 1987 and 1996, including a clause-by-clause assessment that reveals how the statement changed. Suggestions are offered for considerations in designing a new statement.

Peter P.C. Haanappel
International Aviation Framework and Implications for Canadian Policy

The paper first examines current trends in international air transport, including international air transport to and from Canada. These trends include open skies agreements and their provisions on airline alliances; efforts toward air transport liberalization in international organizations, such as the International Civil Aviation Organization, the World Trade Organization, the United Nations Conference on Trade and Development, and the Organisation for Economic Co-operation and Development; and the creation of regional common aviation areas, in particular the European Union and the European Economic Area and the proposed Transatlantic Common Aviation Area. The second part of the paper discusses the legal and regulatory implications for Canada, if it allowed, as a matter of policy, foreign airlines and investors to participate in domestic air transport. This includes the implications of granting cabotage rights to non-Canadian airlines and of allowing foreign airlines and/or investors to establish themselves as Canadian carriers, including the potential effects on airline ownership and control clauses in Canada's bilateral air service agreements.

George Hariton and Peter Milne
Open Access in Network Industries

This study reviews policies introduced to open up the Canadian long distance and local telecommunications and natural gas industries to greater competition and considers the relevance of these measures to the railway industry. In telecommunications, access has taken two forms: (1) interconnection and (2) resale of facilities and functionalities. The analogous concepts in rail transport are interswitching and competitive line rates (interconnection) and running rights (resale). In the long distance telecommunications market, where open access has been in effect for some time, competition has flourished and price rivalry is intense. Even so, the effect of access in terms of overall economic performance is still a matter of controversy. In the local market, competition is still in the early stages, and the effect of open access is harder to assess. Access in the context of natural gas is less directly applicable to rail. The main emphasis to date has been on unbundling ownership of the gas from its carriage. By contrast, railways have traditionally provided only the transport function, unbundled from ownership of the commodities being carried. While pipelines interconnect with each other, gas transport has become competitive only recently, with the construction of an alternative pipeline system. Nor has consideration been given to allowing competitors to use each other's capacity directly or to operate any aspect of another company's pipeline.

Trevor Heaver
The *Shipping Conferences Exemption Act*: Review and Suggestions of Positions Appropriate for the Panel

The paper reviews the intent of the *Shipping Conferences Exemption Act* when first enacted in 1970, describes subsequent developments in the liner shipping industry, and argues that conferences are of greatly diminished significance. It outlines recent opposition to the act from shippers and assesses the arguments of proponents, finding implausible their assertion that Canadian ports would lose traffic and services if the act were eliminated. Finally, the paper offers recommendations for liberalization.

Trevor Heaver
The Statement of National Transportation Policy: Assessment and Suggestions for Change

The report examines and comments on the development of the declaration of national transportation policy in the *Canada Transportation Act*. It describes the origin and intent of the first such declaration in the 1967 act, then the policy debates and motivations for subsequent rewordings in the acts of 1987 and 1996. The paper's central argument is that the declaration has lost focus and needs radical re-thinking.

HLB Decision Economics Inc.

Relationship between E-Business, Advanced Transportation Logistics, and Canadian Industrial Economic Performance

The study examined the direct and indirect productivity effects of e-business investments in transport infrastructure. An original framework was developed to measure indirect benefits of investments that have not been captured in traditional cost-benefit analysis. From recent empirical studies it is estimated that a 10% reduction in transportation costs yields a 14.5% reduction in overall logistics costs. The project included a limited survey of Canadian firms to provide corroboration of potential effects of improvements in transportation system performance on their logistics and productivity. The report concludes that, without consideration of the full supply chain benefits in policy decision making, there is likely to be under-investment in transportation.

HLB Decision Economics Inc.

The Value Proposition for Transit Investment, Subsidy and Federal Involvement

The paper provides a methodology for estimating the value of transit in avoiding the social costs of increasing road congestion in private vehicles, providing 'affordable mobility', and raising urban 'amenity values'. Using plausible values (based on previous studies) for the marginal social costs of congestion, environmental and safety risks of private vehicle use, the methodology is applied to Canadian transit use in aggregate and to case studies of the Toronto and Montreal regions. The results suggest that aggregate national subsidies of about three times existing levels could be justified by the potential benefits. The report also considers the justification for an extended federal role in transit funding.

Bangqiao Jiang

A Review of Studies on the Relationship between Transport Infrastructure Investments and Economic Growth

The author reviews published studies about the relationship at the macro-economic level between public infrastructure capital and economic growth. An extensive literature has developed in North America, since the controversial work of Aschauer in 1989 suggested a growing deficiency in public capital spending. The review describes the development of methodologies and empirical estimates in the U.S. and Canada and suggests some policy implications of the findings.

Kieran MAS (Michael Kieran)

Methods and Practices in Pricing – Railway Track Access

The purpose of the study was to propose principles and methods for setting prices for access to railway infrastructure by guest operators. The paper undertakes three main tasks: (1) to explain the operational, economic and commercial aspects of owning and operating railway track; (2) to examine costing and pricing approaches now used between arm's-length parties in different situations where infrastructure is shared, both with and without traffic solicitation privileges; and (3) to demonstrate through pro forma examples the application of selected concepts, illustrating arrangements that might be made between owners and guest operators in hypothetical yet representative circumstances.

Fred Lazar
Potential Market Impacts of Liberalization Options on the Commercial Canadian Aviation Industry

The report considers the potential effects of further liberalization of domestic aviation, through raising foreign ownership limits; granting foreign airlines modified sixth freedom rights, consecutive cabotage rights and/or stand-alone cabotage rights; or allowing foreign ownership of domestic-only carriers. The paper reviews market entry since deregulation, including developments in the cargo market. It examines experience in the U.S. and Australia, using this to predict likely responses to the various liberalization options. The study concludes that there would be limited entry by foreign competitors, but even that would weaken the financial performance of smaller Canadian carriers. The paper argues against unilateral Canadian liberalization and suggests that relaxing foreign ownership limits might do more to ensure the survival of domestic competition than any other change.

Metropolitan Knowledge International (Bob Lehman)
Potential Uses of Abandoned Rail Corridors for Regional Rail Purposes

The study examines the importance of conserving existing rail corridors for future possible use in regional rail systems. Increased traffic congestion will become a major concern over the next twenty years. The paper explains how the value of existing rail corridors will increase because of future growth in urban centres and the ensuing lack of transportation capacity. It would cost an estimated $3.6 billion to acquire land similar to existing corridors in the six major Canadian cities studied. The study concludes that urban congestion is a national problem, requiring federal action. The main recommendation is to preserve urban corridors with a program similar to the U.S. rail banking program.

Patrick Monahan
Constitutional Implications of Expanded Railway Access

The paper examines the constitutional implications of granting running rights over federally regulated rail lines to provincially regulated railways. The conclusion is that Parliament can grant such rights and require the provincial operator to meet federal statutory requirements. The study also concludes that where operation of the provincial railway remains a separate and distinct undertaking from operation of the federal railway, the mere physical connection between them occasioned by running rights would not change the constitutional status of the provincial railway.

Fred Nix
Alternative Road Financing Arrangements

The paper describes road financing in Canada, including the predominant reliance on provincial and territorial consolidated tax revenues, together with municipal property taxes, and various transfers from senior levels of government for this purpose. Financing alternatives are explored, including toll facilities (highways and bridges) and innovative urban transport funding arrangements, notably in Montreal and Vancouver, involving more direct charges for road use. The paper urges consideration of the approach advocated by the World Bank and applied most extensively in New Zealand – the 'road fund' model of governance.

Tae Hoon Oum
Key Aspects of Global Strategic Alliances and the Impacts on the Future of Air Canada and other Canadian Air Carriers

The report summarizes key features of and recent developments in global strategic airline alliances and investigates the potential roles of Air Canada and other Canadian carriers in increasingly powerful alliance networks. Using an econometric analysis of data on 22 international airlines in the period 1986-1995, the study examines the effects of alliances on productivity, pricing and profitability of partner carriers, along with the effects of strategic alliances on partners' output, frequency of service, market outcome and consumer welfare. Using case studies, it also examines the effects of global alliance networks on intercontinental and North American traffic routing patterns. Anticipated roles of Air Canada and other Canadian carriers in North America and in the global alliance networks are described. Regulatory issues concerning alliances are discussed, with several pro-competitive recommendations offered.

Tae Hoon Oum and Chunyan Yu
Assessment of Recent Performance of Canadian Carriers: Focus on Quantitative Evidence for Evaluating Canada's Air Transport Policy Options

The paper presents the results of econometric analyses comparing the performance of Air Canada and Canadian Airlines with that of eight major U.S. carriers during the 1990s. Performance is assessed in terms of input prices and cost shares, partial factor productivity, total factor productivity, residual TFP, unit costs and cost competitiveness, yield, profitability, and other financial performance indicators. The study found, for example, that Air Canada faced lower input prices than the U.S. airlines, but its productivity ranked lowest among the airlines studied. Canadian Airlines made significant productivity gains and achieved above-average performance relative to the sampled carriers during the latter part of the period, before a sharp fall in 1999. Air Canada's superior yield management allowed it to improve its financial performance considerably and achieve a ranking about average among the sampled carriers, while Canadian Airlines' financial performance declined.

Regulatory Consulting Group Inc. (Margot Priest)
Report on Governance and Accountability: The New Transportation Organizations

The paper adopts a formal analysis of principal/agent relationships to assess governance and accountability of the newly commercialized infrastructure providers for airports, ports, air navigation services and the St. Lawrence Seaway. The results suggest that more attention has been paid to accountability and transparency as the approach to the new entities matured, experience was gained, and criticisms were levelled at earlier arrangements. More and varied mechanisms were built into later governance relationships, notably for the ports, compared to earlier arrangements for airports. Further improvements in governance are possible, particularly for Local Airport Authorities.

Research and Traffic Group
Sustaining Capital Requirements for the Short Line Railway Industry

The Panel's mandate refers to the overall effectiveness of the current legislative and regulatory framework in sustaining the high levels of capital expenditures required to enhance productivity and promote innovation. This paper examines the short line portion of the freight rail sector and the issues affecting its ability to sustain capital spending. The paper describes recent expansion and structure of the short line industry, discusses its capital expenditure requirements and funding sources, and assesses the sector's long-term capital expenditure sustainability in view of its investment requirements, traffic volumes and profitability. In addition, regulatory issues bearing on short line capital spending are discussed, including access to multiple long-haul carriers, enhanced running rights, interswitching and final offer arbitration. A principal conclusion is that the short lines' ability to sustain capital spending is not driven mainly by regulatory provisions, although individual regulatory decisions can be critical to a short line railway. The most important issue is how much traffic short lines can attract and retain as determined by general economic conditions, events affecting major shippers and highway competition.

Thomas W. Ross and W.T. Stanbury
Policy Proposals for Enhancing Competition in Canadian Airline Markets

The report considers policy options to enhance the performance – particularly the competitiveness – of the airline industry. It begins by describing the current state of competition in Canadian airline markets and reviewing the current public policy framework. The report analyzes a broad range of policy alternatives, focusing on mechanisms to preserve or enhance competition and including (1) behavioural policies, such as re-regulation and rules on predation, that seek to control carrier conduct; (2) structural policies that seek to reduce carrier power directly (e.g., by breaking it up into smaller firms) or indirectly by facilitating entry of alternative domestic carriers (e.g., by reducing barriers to entry); and (3) policies that seek to encourage the participation of foreign carriers in Canadian markets. The paper suggests preferred options, including (1) exploring ways to facilitate new domestic entry by easing access to foreign capital (by relaxing foreign ownership regulations) and access to important airport facilities (slots, gates, counters); (2) possible adjustments to the predatory pricing regime to provide greater clarity to large firms; and (3) policies that could be adopted unilaterally to reduce the barriers to foreign carrier participation in Canadian markets. The latter policies include granting rights of establishment; permitting 'modified sixth freedoms' (or 'indirect cabotage'); and relaxing foreign ownership regulations to encourage franchising of foreign carrier operations in Canada. Discussions are urged with Europe, Australia, New Zealand and Mexico about creating a common aviation area. Policies not recommended at this time include breaking up Air Canada, re-regulating the airline industry, or unilaterally granting general rights of cabotage.

Andrew Shea

Assessment of Open Access Policies in Other Industries and Jurisdictions: A Literature Review

This study by The Conference Board of Canada reviews recent literature to assess (a) experience with open access regulatory policies in Canadian industrial sectors where they have been implemented and (b) the experience of other countries with open access regulatory policies in their rail industries. For each situation, the study reviews the essential features of the access policies, reasons for implementing them, the degree of success of the policies in terms of meeting the objectives, and the relevance of the experience to the Canadian rail industry.

Richard Soberman

Public Transportation in Canadian Municipalities: Implications for the *Canada Transportation Act* and the Federal Role in Transit

Canadian municipalities are trying to reduce automobile dependency and raise transit competitiveness as a means of achieving more sustainable development through improvements in urban transit and commuter rail. Given Canada's commitment to greenhouse gas reductions, there is also a strong federal interest in these objectives. Public transit operators perform relatively well, recovering on average about 62% of operating costs from fares – far more than their counterparts in the U.S. However, there is a major shortfall in the capital investment needed to replace transit vehicles, rehabilitate infrastructure, and expand services to accommodate population growth. Municipal governments argue for federal assistance in financing urban transit, primarily through access to some portion of federal fuel taxes generated in urban areas. Some also see railway rationalization and abandonments as opportunities for new transit corridors that may be lost unless the federal government provides special funding to acquire them. The report suggests several amendments to the *Canada Transportation Act*, the most important of which relate to facilitating the acquisition of abandoned railway corridors for urban transit and establishing a mechanism for periodic review of operating agreements for commuter rail. Any new funding for transit should be limited to capital projects, such as acquiring rail corridors and cost sharing of capital assistance to transit operators based on performance.

Trans-Group

Railway Safety and Competitive Access with Common Running Rights

This report examines the safety issues associated with running rights by identifying the possible additional risk factors posed by two railway companies operating over the same track. The report suggests that participants implement appropriate measures to mitigate these risks.

InterVISTAS Consulting Inc. (Michael Trethaway)
Airport Ownership, Management and Price Regulation

The paper examines the ownership and operational structures of airports world-wide. Air transport is a growth industry with a need for continuous investment. The paper reviews the marked shift toward airport privatization to relieve the capital investment burden on governments. International privatization and governance models are reviewed, focusing on Canada's unique not-for-profit version. The paper sees airport improvement fees, introduced to generate needed capital for expansion, as a consequence of this approach. The paper also explores alternative forms of airport price regulation, arguing for caution in considering introduction of any price regulation.

WESTAC
Understanding Competitive Rail Access

As part of the consultation process, the Panel engaged the independent Western Transportation Advisory Council (WESTAC) to prepare a report outlining (1) the positions of interested parties as put forth in their public submissions on the issue of competitive rail access and (2) proposals for change in the competitive access and shipper protection provisions of the *Canada Transportation Act*. In addition to comparing proposals with existing *Canada Transportation Act* provisions, the report offers a list of critical questions concerning competitive access rules and rates for access; profiles of positions on sustainability of capital spending and newly emerging market structures; and profiles of the positions of shippers, railways, governments, labour and others.